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CNC CHARLESTON
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INITIAL GROUNDWATER ASSESSMENT REPORT FOR SITE 28 BUILDING 590A ZONE E

CNC CHARLESTON SC

2/1/2000

TETRA TECH

Rev.1
02/03/00

Initial Ground-Water Assessment Report for Site 28, Building 590A

Zone E
Charleston Naval Complex
North Charleston, South Carolina

Southern Division
Naval Facilities Engineering Command
Contract Number N62467-94-D-0888
Contract Task Order 0089

February, 2000

Rev.1
02/03/00

INITIAL GROUND-WATER ASSESSMENT REPORT FOR SITE 28, BUILDING 590A

ZONE E, CHARLESTON NAVAL COMPLEX NORTH CHARLESTON, SOUTH CAROLINA

COMPREHENSIVE LONG-TERM ENVIRONMENTAL ACTION NAVY (CLEAN) CONTRACT

Submitted to:
Southern Division
Naval Facilities Engineering Command
2155 Eagle Drive
North Charleston, South Carolina 29406

Submitted by:
Tetra Tech NUS
661 Andersen Drive
Foster Plaza 7
Pittsburgh, Pennsylvania 15220

CONTRACT NUMBER N62467-94-D-0888
CONTRACT TASK ORDER 0089

FEBRUARY 2000

PREPARED UNDER THE SUPERVISION OF:

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CERTIFICATION PAGE

I certify that the information contained in this report and on any attachments is true, accurate, and complete to the best of my knowledge, information, and belief.

SOUTH CAROLINA
REGISTERED PROFESSIONAL ENGINEER
No. 17132
GREGORY D. SWANSON

Approved By: 1/27/00

Gregory D. Swanson, P.E.
South Carolina Registration No. 17132
SCDHEC UST Site Rehabilitation Contractor Class I & II No. 24

EXECUTIVE SUMMARY

Tetra Tech NUS, Inc. (TtNUS) has completed a Rapid Assessment (RA) for Site 28 which formerly contained an underground storage tank (UST) system for Building 590A at Charleston Naval Complex (CNC) Zone E, in North Charleston, South Carolina. The UST (UST-590A), a 560-gallon tank, was used to store fuel oil as part of the automobile service station and mini-market formerly located at this site. The RA was performed under the direction of the South Carolina Department of Health and Environmental Control's (SCDHEC's) Rapid Assessment Plan and approval letter dated November 4, 1998. After determining all laboratory analytical results were below the SCDHEC risk-based screening levels (RBSLs), the reporting format was reduced from a Rapid Assessment Report (RAR) to an Initial Ground-Water Assessment (IGWA) Report. The IGWA reporting format is also being used to provide SCDHEC the assessment data in a more simplified format.

TtNUS performed the following actions during this assessment:

- Reviewed available Navy documents to identify potential sources and receptors for petroleum hydrocarbons in the vicinity, to evaluate public and private potable wells, to locate utilities line areas, to locate nearby surface water bodies, and to determine surface hydrology and drainage;
- Reviewed the previously prepared Underground Storage Tank Assessment Report for UST NS1346 to determine boring locations and monitoring well placements;
- Conducted site survey to identify utilities and to construct a site plan;
- Performed direct push technology investigation; collected soil and groundwater samples for field screening of petroleum hydrocarbon constituents using an organic vapor analyzer (OVA);
- Collected groundwater samples from direct push borings for mobile lab screening analysis for benzene, toluene, ethylbenzene, total xylenes (BTEX), naphthalene, and diesel range organics (DRO);
- Installed three temporary piezometers at selected soil borings;
- Installed four shallow permanent monitoring wells to depths of approximately 12.5 feet below land surface (bls) and one deep, vertical delineation monitoring well to a depth of approximately 30 feet bls;
- Collected groundwater samples from the five newly installed permanent monitoring wells for fixed-base laboratory analysis for BTEX, methyl tert-butyl ether (MTBE), ethylene dibromide (EDB), and naphthalene using U.S. Environmental Protection Agency

(USEPA) Method 8260, polynuclear aromatic hydrocarbons (PAHs) using USEPA Method 8270, eight heavy metals using USEPA Method 3050B and 7470A ;

- Collected six soil samples for fixed-base laboratory analysis for BTEX and naphthalene using USEPA Method 8260, PAHs using USEPA Method 8270,
- Collected one soil sample for fixed-base laboratory analysis for total organic carbon (TOC) using USEPA Method 9060, total recoverable petroleum hydrocarbon (TRPH) using USEPA Method 9071A, and grain size analysis using American Society of Testing and Materials (ASTM) Method D-422; and
- Surveyed monitoring well and piezometer top of casing elevations and collected depth to groundwater measurements to evaluate the groundwater flow direction.

Conclusion

On September 23, 1999, depth to groundwater measurements were obtained from each permanent monitoring well. Based on the groundwater elevation data, the localized groundwater flow direction at the site is towards the west-northwest. No free product was detected in any temporary or permanent monitoring well at the site.

On August 13, 16, and September 23, 1999, groundwater samples were collected from five monitoring wells. No dissolved chemicals of concern (CoCs) were detected in any of the groundwater samples collected from each of the five wells.

On August 19 and 23, 1999, soil samples were collected from confirmation soil borings, and analyzed for BTEX and PAHs by a fixed-base laboratory. Toluene was the only CoC detected in the soil sampled.

No soil or groundwater RBSLs were exceeded based on laboratory analysis of samples collected during the RA field effort. Because no RBSLs were exceeded, a site conceptual model or a Tier 2 evaluation was not required, thereby greatly reducing the reporting requirements. As a result, the IGWA report was chosen as the method for reporting the findings of the RA field effort. This report format allows the necessary presentation of assessment data for a site with no CoC concentrations in soil and groundwater exceeding the RBSLs.

Recommendation

No further action (NFA) is requested for Site 24, Building NS1346, of Zone F, CNC because no CoCs were detected in excess of the SCDHEC RBSLs in any of the soil or groundwater samples analyzed by a fixed-base laboratory. The results of the Rapid Assessment are reported in the following IGWA report.

INITIAL GROUND-WATER ASSESSMENT REPORT

Facility Name: Charleston Naval Base, Zone E, Site 28, UST 590A, Building 590A

Site ID Number: 00956

UST Owner or Operator's Name: U.S. Navy Southern Division (SouthDiv) Naval Facilities Engineering Command (NAVFAC)

Address: 2155 Eagle Drive, North Charleston, South Carolina 29406

Phone Number: 843-820-7307

Contractor: Tetra Tech NUS, Inc., Mark W. Darrington, P.G. Cert. # 25

Address: 900 Trail Ridge Road, Aiken, South Carolina 29803

Phone Number: (803) 649-7963

Well Driller: Rod Fuller, Custom Drilling - Hollow Stem Auger. Cert. # 1240

R. Brand and B. Lewis, Columbia Technologies - Direct Push. Cert. # 1485

Receptor and Site Data
Please place a check in the appropriate answer block for each question:

Receptor Survey Questions	No	Yes*
Is there a drinking water supply well (public or private) or surface water supply intake within 1,000 feet of the UST?	X	
Are irrigation or other non-drinking water wells located within 1,000 feet of the UST?		X
Are there other potential receptors (i.e., utilities, surface waters, wetlands) less than 500 feet from the UST?		X

* If "yes" provide additional information:

There are groundwater monitoring wells at additional sites within 1,000 feet of the former UST location

Initial Ground-Water Assessment Report SCDHEC Site ID # 00956

Underground utilities within 250 feet of the site can be seen on the Site Vicinity Map provided in Appendix D. Water, electricity, natural gas, storm drain, and sanitary sewer lines are the utilities adjacent to the site. The compressed air and steam lines are aboveground. Utility lines are located on all sides of the site.
The Cooper River is approximately 250 feet north-northeast from the site.

Were any water wells within 250 feet radius sampled? _____ Yes __X__ No

Is the current use of the site and surrounding properties commercial, residential, Agricultural, or industrial?

Site: Commercial & Industrial Adjacent Properties: Commercial & Industrial

Soil and Monitoring Well Data

Primary Soil Type: Sand with gravel, medium to coarse sand, silty sand, sandy clay, clayey sand

Well Installation Method and Date: Hollow-stem auger (HSA); August 23, 1999

Development Method: Surge and pump

Soil Samples Obtained at 1-2 and 2-3 feet (for fixed lab analysis)

NOTE: ***Four soil samples were collected from three soil borings. A duplicate sample was collected from one of the borings. Three samples (including the duplicate) were collected from the same depth interval (1-2 ft.). The laboratory report for the borings is provided in Appendix B.***

Initial Ground-Water Assessment Report SCDHEC Site ID # 00956

SOIL ANALYTICAL DATA

Sample	Benzene (µg/kg)	Toluene (µg/kg)	Ethyl-benzene (µg/kg)	Xylenes (total) (µg/kg)	Naphthalene (µg/kg)
CNC28-B02/ 28SLB020102	<6	6.00	<6	<6	<6
CNC28-B03/ 28SLB030102	<6	7.00	<6	<6	<6
CNC28-B03/ 28SLB030102D*	<6	4 (J)	<6	<6	<6
CNC28-B05/ 28SLB050203	<9	6 (J)	<9	<9	<9

Sample	Benzo(a)-anthracene (µg/kg)	Benzo(b)-fluoranthene (µg/kg)	Benzo(k)-fluoranthene (µg/kg)	Chrysene (µg/kg)	Dibenzo(a,h) - anthracene (µg/kg)
CNC28-B02/ 28SLB020102	<400	<400	<400	<400	<400
CNC28-B03/ 28SLB030102	<360	<360	<360	<360	<360
CNC28-B03/ 28SLB030102D*	<400	<400	<400	<400	<400
CNC28-B05/ 28SLB050203	<500	<500	<500	<500	<500

NOTES
* Duplicate sample
(J) - Estimated value (analyte detected at a concentration less than the reporting limit but greater than the detection limit).

Ground-Water Data

Depth to Ground Water: 1.42 feet to 2.67 feet below land surface

Well Purging/Sampling Method: Peristaltic pump/low flow purge and sample method

Dates Sampled: August 13 and September 23, 1999

Initial Ground-Water Assessment Report SCDHEC Site ID # 00956

Free Product Thickness: None

Soil/Water Disposal Method: All soil cuttings and purge water were containerized, the containers labeled, and the containers moved to a staging area for final disposal by Charleston Naval Complex.

GROUND-WATER ANALYTICAL DATA

Sample	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (total) (µg/L)	Naphthalene (µg/L)
CNC28M-01/ 28GLM0101	<5	<5	<5	<5	<5
CNC28M-02/ 28GLM0201	<5	<5	<5	<5	<5
CNC28M-02/ 28GLM0201D	<5	<5	<5	<5	<5
CNC28M-03/ 28GLM0301	<5	<5	<5	<5	<5
CNC28TL/ 28TL00101	<5	<5	<5	<5	<5
CNC28TL/ 28TL00201	<5	<5	<5	<5	<5

Sample	Benzo(a)-anthracene (µg/L)	Benzo(b)-fluoranthene (µg/L)	Benzo(k)-fluoranthene (µg/L)	Chrysene (µg/L)	Dibenzo(a,h)-anthracene (µg/L)
CNC28M-01/ 28GLM0101	<12	<12	<12	<12	<12
CNC28M-02/ 28GLM0201	<11	<11	<11	<11	<11
CNC28M-02/ 28GLM0201D	<11	<11	<11	<11	<11
CNC28M-03/ 28GLM0301	<11	<11	<11	<11	<11
CNC28TL**/ 28TL00101	NA	NA	NA	NA	NA
CNC28TL**/ 28TL00201	NA	NA	NA	NA	NA

NOTES
* Duplicate sample
** Trip Blank
NA - Not Analyzed

GROUND-WATER ANALYTICAL DATA (continued)

Sample	EDB (µg/L)	MTBE (µg/L)
CNC28M-01/ 28GLM0101	< 5	< 5
CNC28M-02/ 28GLM0201	< 5	< 5
CNC28M-02/ 28GLM0201D	< 5	< 5
CNC28M-03/ 28GLM0301	< 5	< 5
CNC28TL/ 28TL00101	< 5	< 5
CNC28TL/ 28TL00201	< 5	< 5

NOTES
* Duplicate sample
** Trip Blank
NA - Not Analyzed

Appendices

The appendices required for this report are as follows:

Appendix A. Well Construction and Soil Boring Logs

Appendix B. Laboratory Data

Appendix C. Topographic Map With Site Location

Appendix D. Site Base Map

NOTE: ***Because they are not needed, Appendices E, F, and G are not included.***

Report Completed By: Mark W. [illegible] (signature) Cert. # 25 [illegible]

Date: 11/1/99

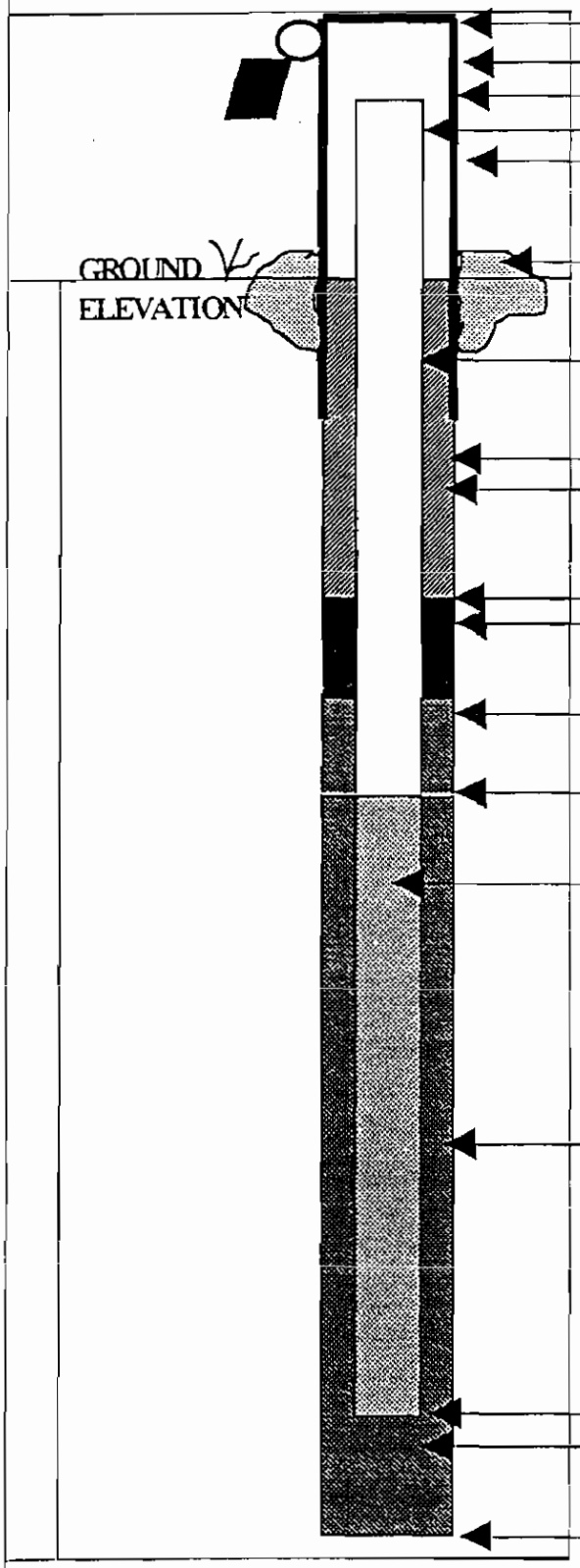
APPENDIX A

WELL CONSTRUCTION AND SOIL BORING LOGS

BORING NO.: MW01

OVERBURDEN MONITORING WELL SHEET

PROJECT	CNC	LOCATION:	Site 28	DRILLER	R. Fuller
PROJECT NO.	0126	BORING	MW12	METHOD:	~~DPT~~ 1.5" Φ
ELEVATION		DATE	8/23/99	DRILLING	~~HSA~~
FIELD GEOLOGIST	J. Hofer			DEVELOPMENT: NA	



ELEVATION OF TOP OF SURFACE CASING: NA

ELEVATION OF TOP OF RISER PIPE:

STICK-UP TOP OF SURFACE CASING: NA

STICK-UP RISER PIPE:

I.D. OF SURFACE CASING: 8"

TYPE OF SURFACE CASING: Flush Mount

TYPE OF SURFACE SEAL: Concrete.

RISER PIPE I.D.: 1.25"

TYPE OF RISER PIPE: PVC

BOREHOLE DIAMETER: 1.5"

TYPE OF SEAL: Cement

ELEVATION / DEPTH OF SEAL: 11'

TYPE OS SEAL: "Choke Sand"

DEPTH TOP OF SAND PACK: NA

ELEVATION / DEPTH TOP OF SCREEN: 12'

TYPE OF SCREEN: PVC

SLOT SIZE X LENGTH: 0.010 X 10'

I.D. OF SCREEN: 1.25"

TYPE OF SAND PACK: NA

(No sand pack used – natural formational sediment)

ELEVATION / DEPTHBOTTOM OF SCREEN: 112'

ELEVATION / DEPTH BOTTOM OF SAND PACK: 112'

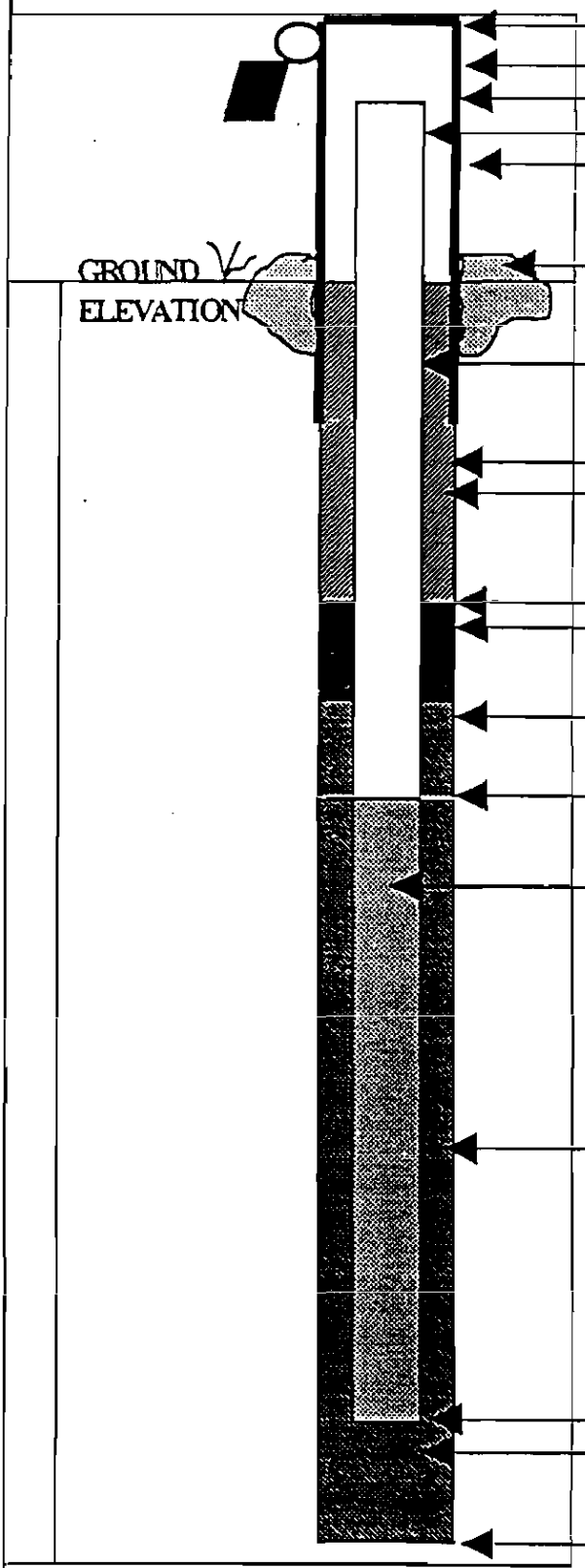
TYPE OF BACKFILL BELOW OBSERVATION WELL: None

ELEVATION / DEPTH OF HOLE: 112'

BORING NO.: MW2

OVERBURDEN MONITORING WELL SHEET

PROJECT	CNC	LOCATION:	Site 28	DRILLER	RFuller
PROJECT NO.	0126	BORING	MW2	METHOD: ~~BPT~~	
ELEVATION		DATE	8/23/99	DRILLING	HSA
FIELD GEOLOGIST	J. Hofer			DEVELOPMENT: NA	



ELEVATION OF TOP OF SURFACE CASING: NA

ELEVATION OF TOP OF RISER PIPE:

STICK-UP TOP OF SURFACE CASING: NA

STICK-UP RISER PIPE: -

I.D. OF SURFACE CASING: 8"

TYPE OF SURFACE CASING: flush Mount

TYPE OF SURFACE SEAL: Concrete

RISER PIPE I.D.: 2"

TYPE OF RISER PIPE: PVC

BOREHOLE DIAMETER: 6"

TYPE OF SEAL: [redacted] Cement

ELEVATION / DEPTH OF SEAL: 11.0

TYPE OS SEAL: fine sand

DEPTH TOP OF SAND PACK: 1.5

ELEVATION / DEPTH TOP OF SCREEN: 12.0

TYPE OF SCREEN: PVC

SLOT SIZE X LENGTH: 0.01 x 10ft

I.D. OF SCREEN: 2"

TYPE OF SAND PACK: 20/30

ELEVATION / DEPTHBOTTOM OF SCREEN: 112.0

ELEVATION / DEPTH BOTTOM OF SAND PACK: 112.5

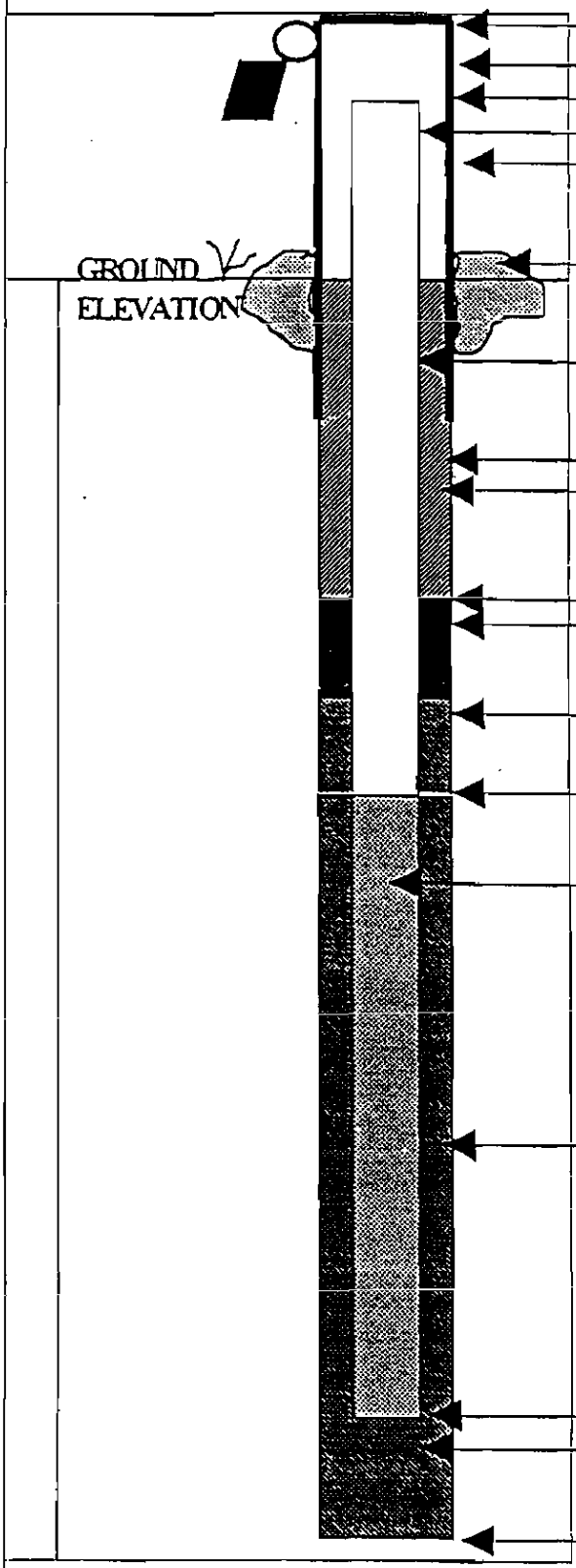
TYPE OF BACKFILL BELOW OBSERVATION WELL: NA

ELEVATION / DEPTH OF HOLE: 112.5

BORING NO.: MW 3

OVERBURDEN MONITORING WELL SHEET

PROJECT	CNC	LOCATION:	Site 28	DRILLER	R. Fuller
PROJECT NO.	0126	BORING	MW3	METHOD: ~~DPT~~	
ELEVATION		DATE	8/23/99	DRILLING	HSA
FIELD GEOLOGIST	J. Hofer			DEVELOPMENT: NA	



ELEVATION OF TOP OF SURFACE CASING: NA

ELEVATION OF TOP OF RISER PIPE:

STICK-UP TOP OF SURFACE CASING: NA

STICK-UP RISER PIPE: -

I.D. OF SURFACE CASING: 8"

TYPE OF SURFACE CASING: flush-mount

TYPE OF SURFACE SEAL: Concrete

RISER PIPE I.D.: 2"

TYPE OF RISER PIPE: PVC

BOREHOLE DIAMETER: 6"

TYPE OF SEAL: cement

ELEVATION / DEPTH OF SEAL: 11.0

TYPE OS SEAL: fine sand

DEPTH TOP OF SAND PACK: 1.5

ELEVATION / DEPTH TOP OF SCREEN: 120

TYPE OF SCREEN: PVC

SLOT SIZE X LENGTH: 0.01 x 10 ft

I.D. OF SCREEN: 2"

TYPE OF SAND PACK: 20/30

ELEVATION / DEPTHBOTTOM OF SCREEN: 112.0

ELEVATION / DEPTH BOTTOM OF SAND PACK: 112.5

TYPE OF BACKFILL BELOW OBSERVATION WELL: NA

ELEVATION / DEPTH OF HOLE: 112.5

BORING LOG

Page ___ of ___

PROJECT NAME: Site 28
PROJECT NUMBER:
DRILLING COMPANY:
DRILLING RIG: Geoprobe 5400

BORING NUMBER: CNC 28 B01
DATE: 6-3-99
GEOLOGIST:
DRILLER: B. Lewis

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS*	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
				1.0			Brown clayey f. to						
							med. sand w/ Course Gravel						
							Brown & Gray silty						
	4			3.0			clayey Tr. of fine sand		Moist	0	0	0	0
							Dray Gray & Black silty		Moist				
							clay Tr. of f. sand.						
	8									0	0	0	0
				10.0			Brown ~~Green~~ clay & f. to		wet				
				11.0			med. sand Tr. silt.		organic.				
	12			12.0			Greenish Gray clay		wet				
							& coarse sand Trace						
							of silt						
				15.0									
				B.T.			W/L = 13.2		Set Screen				
									from 12.0-15.0'				
									Sampled Water				
									~~#28SFB01012~~ 28SFB01215				
									Time: 1036				
									H.S. = 0 ppm				

Sampled Soil from 1.0-2.0 # 28SFB01012 Time 8:1003

* When rock coring, enter rock brokeness

** Include monitor reading in 5 foot intervals @ borehole. Increase reading frequency if elevated reponse read

Drilling Area Background (ppm): ____

Remarks: ____

Converted to Well: Yes ____ No ____ Well I.D. #: ____

BORING LOG

Page ___ of ___

PROJECT NAME: Site 28
PROJECT NUMBER:
DRILLING COMPANY:
DRILLING RIG: Geoprobe 5400

BORING NUMBER: CNC28B02
DATE: 6-3-99
GEOLOGIST:
DRILLER: B. Lewis

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS*	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**	
				.5			Brown ~~sandy~~ sand f. w/ Roots							
							Brown clay & f. sand.							sampled soil from 8.0'-11.0'
				3.0			Gray silty clay Tr. of fine sand (Organic)							#28SFB02081
	4		2	4.0					wet	0	0	0	0	Time: 0911
							Dark Gray silty clay w/sand lenes Organic		muck					
	8													
									Set Screen from 8.0'-11.0'					
	11			11.0			W/L = 9.4		#28SFB02081 Time: 0944					

*When rock coring, enter rock brokeness

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read

Drilling Area Background (ppm): ____

Remarks: ____

Converted to Well: Yes ____ No ____ Well I.D. #: ____

BORING LOG

Page ___ of ___

PROJECT NAME: Site 28
PROJECT NUMBER:
DRILLING COMPANY:
DRILLING RIG:

BORING NUMBER: CNC28B03
DATE: 6-3-99
GEOLOGIST:
DRILLER: B. Lewis

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS *	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
							Concrete .4'						
				1.5			Tan f. to Med Sand.						
							Gray silty clay trace						
	4		1.8	4.0			of sand & gravel		wet	0	0	0	0
							Greenish gray silty						
							clay Trace c sand		wet				
				7.0			Greenish Gray f.						
	8		1.7				To Med Sand Tr. silt		wet	0	0	0	0
				10.0									
							Greenish Gray & Tan						
	12		2.5				sandy clay						
									Set Screen				
									from 9.0-12.0				
				15			W/L = 13.0						
				B.T					Sampled Water				
									# 28GFB03[illegible]				
									Time: 1135				
									H.S. = 0 ppm				

Sampled Soi
from 1.0'-2.0
#
28SFB03[illegible]
Time 2 105

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read

Drilling Area Background (ppm): ____

Remarks:

Converted to Well: Yes ____ No ____ Well I.D. #: ____

BORING LOG

Page ___ of ___

PROJECT NAME: Site 28
PROJECT NUMBER:
DRILLING COMPANY: Columbia
DRILLING RIG: Geoprobe 5400

BORING NUMBER: ENC 28B04
DATE: 6-3-99
GEOLOGIST:
DRILLER: B. Lewis

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS*	Remarks	PID/FID Reading (ppm): Sample	Sampler BZ	Borehole**	Driller BZ**
				.5			Concrete.						
				2.0			Tan f. silty sand						
				3.0			Dark gray silty f. Sand		Moist				
	4		2.0				Greenish gray silty		Moist	0	0	0	0
				5.0'			Green-gray silty f.		Wet				
							Sand.						
							Dark greenish Gray		wet				
	8		3.0'				silty Clay Tr. silt						
							w/sand lens		Organic				
	12									15 0			
									Set Screen				
				15.0					from 12.0'-15.0'				
				B.T									
									Sampled Water				
									# 28GFB04125				
									Time 0 1525				
									H.S. = 150 ppm				

Sampled Soil from 1.0 2.0 # 28SFB04010 Time 0 1409

*When rock coring, enter rock brokeness

** Include monitor reading in 5 foot intervals @ borehole. Increase reading frequency if elevated reponse read

Drilling Area Background (ppm):

Remarks:

Converted to Well: Yes ____ No ____ Well I.D. #:

BORING LOG

PROJECT NAME: CWC
PROJECT NUMBER:
DRILLING COMPANY: Tetra tech
DRILLING RIG: Bryn

BORING NUMBER: 28 B05
DATE: 6/20/99
GEOLOGIST:
DRILLER: R. Brand

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION: Soil Density/ Consistency or Rock Hardness	Color	Material Classification	USCS*	Remarks	PID/FID Reading (ppm): Sample Jar	Sample Zone	Borehole	Drilling Area
	1					Brn.	Silty Sand		Dry				
	2					Brn	Silty Sand		↓	0			
	3					Gray	Silty Clay		Moist				
	4					Blue Gray	Silty Clay		Saturated	0			
	5					↓	↓		↓	110			

* When rock coring, enter rock brokeness.

** Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks:

Drilling Area Background (ppm):

Converted to Well: Yes Temp No _____ Well I.D. #:

Hand Auger

BORING LOG

Page ___ of ___

PROJECT NAME: Site 28 Zone E
PROJECT NUMBER:
DRILLING COMPANY:
DRILLING RIG: Hardpanner

BORING NUMBER: B06
DATE: 7-7-98
GEOLOGIST:
DRILLER: J.A.

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION			USCS*	Remarks	PID/FID Reading (ppm)				
	1						Br. sandy clay							H.S.=0 ppm.
	2			1.5			Gray w/Br. silty, sandy		Sampled Soil					H.S.=0 ppm
	3			2.0			clay		from 2.0'-3.0'					
	4			3.5			Gray silty clay tr.		#28SFB06020B					
	5						of sand							
	6			6.0			Moist @ 3.0'		Product odor					
				B.T.			Wet @ 3.4'		in wet soil					
							Blue, Gray silty clay							
							Set Well Screen							
							from 4.0'-6.0'							
							Sampled Water							
							@ 0935							
							#28SFB06040B							

* When rock coring, enter rock brokeness.

** Include monitor reading in 5 foot intervals @ borehole. Increase reading frequency if elevated reponse read.

Remarks:

Drilling Area Background (ppm):

onverted to Well: Yes ____ No ____ Well I.D. #:

APPENDIX B

LABORATORY DATA

KATAHDIN ANALYTICAL SERVICES
REPORT OF ANALYTICAL RESULTS

'ent: PAUL CALLIGAN
Tetra Tech NUS
1401 Oven Park Dr.
Suite 102
Tallahassee, FL 32308

Proj. ID: CNC CHARLESTON

Lab Number: WP3683-7
SDG: WP3683
Report Date: 9/23/99
PO No. : N7912-P99264
Project: CTO #68
% Solids: 85
Method: SW8260
Date Analyzed: 8/28/99

Sample Description	Matrix	Sampled Date	Rec'd Date	Ext. Date	Ext'd By	Ext. Method	Analyst
28SLB020102	SL	8/19/99	8/20/99	8/28/99	JSS	5030	JSS

Compound	Result	Units	DF	Sample PQL	Method PQL
BENZENE	<6	ug/Kg	1.1	6	5
TOLUENE	6	ug/Kg	1.1	6	5
1,2-DIBROMOETHANE	<6	ug/Kg	1.1	6	5
ETHYLBENZENE	<6	ug/Kg	1.1	6	5
NAPHTHALENE	<6	ug/Kg	1.1	6	5
MTBE	<6	ug/Kg	1.1	6	5
TOTAL XYLENES	<6	ug/Kg	1.1	6	5
DIBROMOFLUOROMETHANE	90	%	1.1		
DICHLOROETHANE-D4	100	%	1.1		
LUENE-D8	77	%	1.1		
P-BROMOFLUOROBENZENE	64	%	1.1		

Report Notes:

KATAHDIN ANALYTICAL SERVICES
REPORT OF ANALYTICAL RESULTS

Client:	PAUL CALLIGAN Tetra Tech NUS 1401 Oven Park Dr. Suite 102 Tallahassee, FL 32308	Lab Number:	WP3683-7
		SDG:	WP3683
		Report Date:	9/23/99
		PO No. :	N7912-P99264
		Project:	CTO #68
Proj. ID:	CNC CHARLESTON	% Solids:	85
		Method:	EPA 8270
		Date Analyzed:	9/10/99

Sample Description	Matrix	Sampled Date	Rec'd Date	Ext. Date	Ext'd By	Ext. Method	Analyst
28SLB020102	SL	8/19/99	8/20/99	8/23/99	LAP	SW3550	KRT

Compound	Result	Units	DF	Sample PQL	Method PQL
NAPHTHALENE	<400	ug/Kg	1.2	400	330
2-METHYLNAPHTHALENE	<400	ug/Kg	1.2	400	330
ACENAPHTHYLENE	<400	ug/Kg	1.2	400	330
ACENAPHTHENE	<400	ug/Kg	1.2	400	330
FLUORENE	<400	ug/Kg	1.2	400	330
PHENANTHRENE	<400	ug/Kg	1.2	400	330
ANTHRACENE	<400	ug/Kg	1.2	400	330
FLUORANTHENE	<400	ug/Kg	1.2	400	330
PYRENE	<400	ug/Kg	1.2	400	330
BENZO[A]ANTHRACENE	<400	ug/Kg	1.2	400	330
CHRYSENE	<400	ug/Kg	1.2	400	330
BENZO[B]FLUORANTHENE	<400	ug/Kg	1.2	400	330
BENZO[K]FLUORANTHENE	<400	ug/Kg	1.2	400	330
BENZO[A]PYRENE	<400	ug/Kg	1.2	400	330
INDENO[1,2,3-CD]PYRENE	<400	ug/Kg	1.2	400	330
DIBENZ[A,H]ANTHRACENE	<400	ug/Kg	1.2	400	330
BENZO[G,H,I]PERYLENE	<400	ug/Kg	1.2	400	330
NITROBENZENE-D5	47	%	1.2		
2-FLUOROBIPHENYL	63	%	1.2		
TERPHENYL-D14	109	%	1.2		

Report Notes:

Katahdin
ANALYTICAL SERVICES

CLIENT: PAUL CALLIGAN
Tetra Tech NUS
1401 Oven Park Dr., Suite 102
Tallahassee, FL 32308

Lab Number : WP-3683-7
Report Date: 09/27/99
PO No. : N7912-P99264
Project : CTO #68

WIC#: CNC CHARLESTON

REPORT OF ANALYTICAL RESULTS

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED DATE	RECEIVED
28SLB020102	Solid	CLIENT	08/19/99	08/20/99

PARAMETER	RESULT	UNITS	DF	*PQL	METHOD	ANALYZED	BY	NOTES
Solids-Total Residue (TS)	85.	wt %	1.0	0.10	CLP/CIP SOW	08/25/99	JF	1

* PQL (Practical Quantitation Level) represents laboratory reporting limits and may not reflect sample-specific reporting limits. Sample-specific limits are indicated by results annotated with '<' valu
(1) Sample Preparation on 08/24/99 by JF

09/27/99

LJO/msmajc(dw)
PH24TSS8
CC: MS LEE LECK
TETRA TECH NUS
FOSTER PLAZA 7
661 ANDERSEN DR.

KATAHDIN ANALYTICAL SERVICES
REPORT OF ANALYTICAL RESULTS

Client: PAUL CALLIGAN
Tetra Tech NUS
1401 Oven Park Dr.
Suite 102
Tallahassee, FL 32308

Proj. ID: CNC CHARLESTON

Lab Number: WP3683-3
SDG: WP3683
Report Date: 9/23/99
PO No. : N7912-P99264
Project: CTO #68
% Solids: 83
Method: SW8260
Date Analyzed: 8/26/99

Sample Description	Matrix	Sampled Date	Rec'd Date	Ext. Date	Ext'd By	Ext. Method	Analyst
28SLB030102	SL	8/19/99	8/20/99	8/26/99	DJP	5030	DJP

Compound	Result	Units	DF	Sample PQL	Method PQL
BENZENE	<6	ug/Kg	1.2	6	5
TOLUENE	7	ug/Kg	1.2	6	5
1,2-DIBROMOETHANE	<6	ug/Kg	1.2	6	5
ETHYLBENZENE	<6	ug/Kg	1.2	6	5
NAPHTHALENE	<6	ug/Kg	1.2	6	5
MTBE	<6	ug/Kg	1.2	6	5
TOTAL XYLENES	<6	ug/Kg	1.2	6	5
DIBROMOFLUOROMETHANE	73	%	1.2		
1,2-DICHLOROETHANE-D4	67	%	1.2		
TOLUENE-D8	$64	%	1.2		
4-BROMOFLUOROBENZENE	$40	%	1.2		

Report Notes: $

KATAHDIN ANALYTICAL SERVICES
REPORT OF ANALYTICAL RESULTS

Client: PAUL CALLIGAN
Tetra Tech NUS
1401 Oven Park Dr.
Suite 102
Tallahassee, FL 32308

Proj. ID: CNC CHARLESTON

Lab Number: WP3683-3
SDG: WP3683
Report Date: 9/24/99
PO No. : N7912-P99264
Project: CTO #68
% Solids: 83
Method: EPA 8270
Date Analyzed: 9/9/99

Sample Description	Matrix	Sampled Date	Rec'd Date	Ext. Date	Ext'd By	Ext. Method	Analyst
28SLB030102	SL	8/19/99	8/20/99	8/23/99	LAP	SW3550	KRT

Compound	Result	Units	DF	Sample PQL	Method PQL
NAPHTHALENE	<360	ug/Kg	1.1	360	330
2-METHYLNAPHTHALENE	<360	ug/Kg	1.1	360	330
ACENAPHTHYLENE	<360	ug/Kg	1.1	360	330
ACENAPHTHENE	<360	ug/Kg	1.1	360	330
FLUORENE	<360	ug/Kg	1.1	360	330
PHENANTHRENE	<360	ug/Kg	1.1	360	330
ANTHRACENE	<360	ug/Kg	1.1	360	330
FLUORANTHENE	<360	ug/Kg	1.1	360	330
PYRENE	<360	ug/Kg	1.1	360	330
BENZO[A]ANTHRACENE	<360	ug/Kg	1.1	360	330
CHRYSENE	<360	ug/Kg	1.1	360	330
BENZO[B]FLUORANTHENE	<360	ug/Kg	1.1	360	330
BENZO[K]FLUORANTHENE	<360	ug/Kg	1.1	360	330
BENZO[A]PYRENE	<360	ug/Kg	1.1	360	330
INDENO[1,2,3-CD]PYRENE	<360	ug/Kg	1.1	360	330
DIBENZ[A,H]ANTHRACENE	<360	ug/Kg	1.1	360	330
BENZO[G,H,I]PERYLENE	<360	ug/Kg	1.1	360	330
NITROBENZENE-D5	78	%	1.1		
2-FLUOROBIPHENYL	82	%	1.1		
TERPHENYL-D14	91	%	1.1		

Report Notes:

Katahdin
ANALYTICAL SERVICES

Lab Number : WP-3683-3
Report Date: 09/27/99
PO No. : N7912-P99264
Project : CTO #68

CLIENT: PAUL CALLIGAN
Tetra Tech NUS
1401 Oven Park Dr., Suite 102
Tallahassee, FL 32308

WIC#: CNC CHARLESTON

REPORT OF ANALYTICAL RESULTS

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED DATE	RECEIVED
28SLB030102	Solid	CLIENT	08/19/99	08/20/99

PARAMETER	RESULT	UNITS	DF	*PQL	METHOD	ANALYZED	BY	NOTES
Solids-Total Residue (TS)	83.	wt %	1.0	0.10	CLP/CIP SOW	08/26/99	JF	1
Total Combustible Organics	2.0	wt %	1.0	0.1	ASTM D2974-8	08/26/99	JF	1

* PQL (Practical Quantitation Level) represents laboratory reporting limits and may not reflect sample-specific reporting limits. Sample-specific limits are indicated by results annotated with '<' values.
(1) Sample Preparation on 08/23/99 by JF

09/27/99

LJO/msmajc(dw)
PH23VSS6
CC: MS LEE LECK
TETRA TECH NUS
FOSTER PLAZA 7
661 ANDERSEN DR.

340 County Road No. 5
P.O. Box 720, Westbrook, ME 04098
Tel: (207) 874-2400 Fax: (207) 775-4029

http://katahdinlab.com

210 West Road No. 5, Portsmouth, NH 03801
Tel: (603) 431-5777 Fax: (603) 436-3356

Client:	Katahdin Analytical 340 County Road Westbrook, Maine 04092
Contact:	Ms. Andrea Colby
Project Description:	Former Naval Complex

cc: KATA00199 Report Date: September 02, 1999

Sample ID	: 28SLB030102
Lab ID	: 9908592-05
Matrix	: Soil
Date Collected	: 08/19/99
Date Received	: 08/19/99
Priority	: Routine
Collector	: Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
General Chemistry											
Total Rec. Petro. Hydrocarbons	U	60.0	120	240	mg/kg	1.0	AAT	08/30/99	1030	157244	1
Evaporative Loss @ 105 C		17.0	1.00	1.00	wt%	1.0	GJ	08/26/99	1650	156926	2
Total Organic Carbon		5870	43.1	100	mg/kg	1.0	LS	08/26/99	1327	156799	3

M = Method	Method-Description
M 1	SW846 9071A
M 2	EPA 3550
M 3	SW846 9060 Modified

Notes:
The qualifiers in this report are defined as follows:
ND indicates that the analyte was not detected at a concentration greater than the detection limit.
J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).
U indicates that the analyte was not detected at a concentration greater than the detection limit.
* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

Data reported in mass/mass units is reported as 'dry weight'.

Client:	Katahdin Analytical 340 County Road Westbrook, Maine 04092
Contact:	Ms. Andrea Colby
Project Description:	Former Naval Complex

cc: KATA00199 Report Date: September 02, 1999

Sample ID	: 28SLB030102M
Lab ID	: 9908592-07
Matrix	: Soil
Date Collected	: 08/19/99
Date Received	: 08/19/99
Priority	: Routine
Collector	: Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
General Chemistry											
Total Rec. Petro. Hydrocarbons	J	186	120	240	mg/kg	1.0	AAT	08/30/99	1030	157244	1
Evaporative Loss @ 105 C		17.0	1.00	1.00	wt%	1.0	GJ	08/26/99	1650	156926	2
Total Organic Carbon		6230	43.1	100	mg/kg	1.0	LS	08/26/99	1422	156799	3

M = Method	Method-Description
M 1	SW846 9071A
M 2	EPA 3550
M 3	SW846 9060 Modified

Notes:
The qualifiers in this report are defined as follows:
ND indicates that the analyte was not detected at a concentration greater than the detection limit.
J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).
U indicates that the analyte was not detected at a concentration greater than the detection limit.
* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

Data reported in mass/mass units is reported as 'dry weight'.

KATAHDIN ANALYTICAL SERVICES
REPORT OF ANALYTICAL RESULTS

Client: PAUL CALLIGAN
Tetra Tech NUS
1401 Oven Park Dr.
Suite 102
Tallahassee, FL 32308

Proj. ID: CNC CHARLESTON

Lab Number: WP3683-8
SDG: WP3683
Report Date: 9/23/99
PO No. : N7912-P99264
Project: CTO #68
% Solids: 82
Method: SW8260
Date Analyzed: 8/27/99

Sample Description	Matrix	Sampled Date	Rec'd Date	Ext. Date	Ext'd By	Ext. Method	Analyst
28SLB030102D	SL	8/19/99	8/20/99	8/27/99	JSS	5030	JSS

Compound	Result	Units	DF	Sample PQL	Method PQL
BENZENE	<6	ug/Kg	1.1	6	5
TOLUENE	J4	ug/Kg	1.1	6	5
1,2-DIBROMOETHANE	<6	ug/Kg	1.1	6	5
ETHYLBENZENE	<6	ug/Kg	1.1	6	5
NAPHTHALENE	J3	ug/Kg	1.1	6	5
MTBE	<6	ug/Kg	1.1	6	5
TOTAL XYLENES	<6	ug/Kg	1.1	6	5
DIBROMOFLUOROMETHANE	$8	%	1.1		
1,2-DICHLOROETHANE-D4	$12	%	1.1		
TOLUENE-D8	$2	%	1.1		
P-BROMOFLUOROBENZENE	$2	%	1.1		

Report Notes: J, $

KATAHDIN ANALYTICAL SERVICES
REPORT OF ANALYTICAL RESULTS

Client: PAUL CALLIGAN
Tetra Tech NUS
1401 Oven Park Dr.
Suite 102
Tallahassee, FL 32308

Proj. ID: CNC CHARLESTON

Lab Number: WP3683-8RA
SDG: WP3683
Report Date: 9/23/99
PO No. : N7912-P99264
Project: CTO #68
% Solids: 82
Method: SW8260
Date Analyzed: 8/28/99

Sample Description	Matrix	Sampled Date	Rec'd Date	Ext. Date	Ext'd By	Ext. Method	Analyst
28SLB030102D	SL	8/19/99	8/20/99	8/28/99	JSS	5030	JSS

Compound	Result	Units	DF	Sample PQL	Method PQL
BENZENE	<6	ug/Kg	1.1	6	5
TOLUENE	J3	ug/Kg	1.1	6	5
1,2-DIBROMOETHANE	<6	ug/Kg	1.1	6	5
ETHYLBENZENE	<6	ug/Kg	1.1	6	5
NAPHTHALENE	<6	ug/Kg	1.1	6	5
MTBE	<6	ug/Kg	1.1	6	5
TOTAL XYLENES	<6	ug/Kg	1.1	6	5
DIBROMOFLUOROMETHANE	$40	%	1.1		
1,2-DICHLOROETHANE-D4	$47	%	1.1		
LUENE-D8	$24	%	1.1		
-BROMOFLUOROBENZENE	$11	%	1.1		

port Notes: J, $

KATAHDIN ANALYTICAL SERVICES
REPORT OF ANALYTICAL RESULTS

Client: PAUL CALLIGAN
Tetra Tech NUS
1401 Oven Park Dr.
Suite 102
Tallahassee, FL 32308

Proj. ID: CNC CHARLESTON

Lab Number: WP3683-8
SDG: WP3683
Report Date: 9/23/99
PO No. : N7912-P99264
Project: CTO #68
% Solids: 82
Method: EPA 8270
Date Analyzed: 9/10/99

Sample Description	Matrix	Sampled Date	Rec'd Date	Ext. Date	Ext'd By	Ext. Method	Analyst
28SLB030102D	SL	8/19/99	8/20/99	8/23/99	LAP	SW3550	KRT

Compound	Result	Units	DF	Sample PQL	Method PQL
NAPHTHALENE	<400	ug/Kg	1.2	400	330
2-METHYLNAPHTHALENE	<400	ug/Kg	1.2	400	330
ACENAPHTHYLENE	<400	ug/Kg	1.2	400	330
ACENAPHTHENE	<400	ug/Kg	1.2	400	330
FLUORENE	<400	ug/Kg	1.2	400	330
PHENANTHRENE	<400	ug/Kg	1.2	400	330
ANTHRACENE	<400	ug/Kg	1.2	400	330
FLUORANTHENE	<400	ug/Kg	1.2	400	330
PYRENE	<400	ug/Kg	1.2	400	330
BENZO[A]ANTHRACENE	<400	ug/Kg	1.2	400	330
CHRYSENE	<400	ug/Kg	1.2	400	330
BENZO[B]FLUORANTHENE	<400	ug/Kg	1.2	400	330
BENZO[K]FLUORANTHENE	<400	ug/Kg	1.2	400	330
BENZO[A]PYRENE	<400	ug/Kg	1.2	400	330
INDENO[1,2,3-CD]PYRENE	<400	ug/Kg	1.2	400	330
DIBENZ[A,H]ANTHRACENE	<400	ug/Kg	1.2	400	330
BENZO[G,H,I]PERYLENE	<400	ug/Kg	1.2	400	330
NITROBENZENE-D5	48	%	1.2		
2-FLUOROBIPHENYL	65	%	1.2		
TERPHENYL-D14	92	%	1.2		

Report Notes:

Client:	Katahdin Analytical 340 County Road Westbrook, Maine 04092
Contact:	Ms. Andrea Colby
Project Description:	Former Naval Complex

cc: KATA00199 Report Date: September 02, 1999

Sample ID	: 28SLB030102D
Lab ID	: 9908592-06
Matrix	: Soil
Date Collected	: 08/19/99
Date Received	: 08/19/99
Priority	: Routine
Collector	: Client

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	M
General Chemistry											
Total Rec. Petro. Hydrocarbons	U	49.2	123	246	mg/kg	1.0	AAT	08/30/99	1030	157244	1
Evaporative Loss @ 105 C		19.0	1.00	1.00	wt%	1.0	GJ	08/26/99	1650	156926	2
Total Organic Carbon		6110	43.1	100	mg/kg	1.0	LS	08/26/99	1355	156799	3

M = Method	Method-Description
M 1	SW846 9071A
M 2	EPA 3550
M 3	SW846 9060 Modified

Notes:
The qualifiers in this report are defined as follows:
ND indicates that the analyte was not detected at a concentration greater than the detection limit.
J indicates presence of analyte at a concentration less than the reporting limit (RL) and greater than the detection limit (DL).
U indicates that the analyte was not detected at a concentration greater than the detection limit.
* indicates that a quality control analyte recovery is outside of specified acceptance criteria.

Data reported in mass/mass units is reported as 'dry weight'.

Katahdin
ANALYTICAL SERVICES

Lab Number : WP-3683-8
Report Date: 09/27/99
PO No. : N7912-P99264
Project : CTO #68

CLIENT: PAUL CALLIGAN
Tetra Tech NUS
1401 Oven Park Dr., Suite 102
Tallahassee, FL 32308

WIC#: CNC CHARLESTON

REPORT OF ANALYTICAL RESULTS

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED DATE	RECEIVED
28SLB030102D	Solid	CLIENT	08/19/99	08/20/99

PARAMETER	RESULT	UNITS	DF	*PQL	METHOD	ANALYZED	BY	NOTES
Solids-Total Residue (TS)	83.	wt %	1.0	0.10	CLP/CIP SOW	08/26/99	JF	1
Total Combustible Organics	2.1	wt %	1.0	0.1	ASTM D2974-8	08/26/99	JF	1

* PQL (Practical Quantitation Level) represents laboratory reporting limits and may not reflect sample-specific reporting limits. Sample-specific limits are indicated by results annotated with '<' values.
(1) Sample Preparation on 08/23/99 by JF

09/27/99

LJO/msmajc(dw)
PH23VSS6
CC: MS LEE LECK
TETRA TECH NUS
FOSTER PLAZA 7
661 ANDERSEN DR.

KATAHDIN ANALYTICAL SERVICES
REPORT OF ANALYTICAL RESULTS

Client: PAUL CALLIGAN
Tetra Tech NUS
1401 Oven Park Dr.
Suite 102
Tallahassee, FL 32308

Proj. ID: CNC CHARLESTON

Lab Number: WP3683-11RA
SDG: WP3683
Report Date: 9/23/99
PO No. : N7912-P99264
Project: CTO #68
% Solids: 67
Method: SW8260
Date Analyzed: 8/28/99

Sample Description	Matrix	Sampled Date	Rec'd Date	Ext. Date	Ext'd By	Ext. Method	Analyst
28SLB050203	SL	8/19/99	8/20/99	8/28/99	JSS	5030	JSS

Compound	Result	Units	DF	Sample PQL	Method PQL
BENZENE	<6	ug/Kg	1.2	6	5
TOLUENE	8	ug/Kg	1.2	6	5
1,2-DIBROMOETHANE	<6	ug/Kg	1.2	6	5
ETHYLBENZENE	<6	ug/Kg	1.2	6	5
NAPHTHALENE	<6	ug/Kg	1.2	6	5
MTBE	<6	ug/Kg	1.2	6	5
TOTAL XYLENES	<6	ug/Kg	1.2	6	5
DIBROMOFLUOROMETHANE	85	%	1.2		
1,2-DICHLOROETHANE-D4	91	%	1.2		
TOLUENE-D8	71	%	1.2		
4-BROMOFLUOROBENZENE	$56	%	1.2		

Report Notes: $

0000046

KATAHDIN ANALYTICAL SERVICES
REPORT OF ANALYTICAL RESULTS

Client: PAUL CALLIGAN
Tetra Tech NUS
1401 Oven Park Dr.
Suite 102
Tallahassee, FL 32308

Proj. ID: CNC CHARLESTON

Lab Number: WP3683-11
SDG: WP3683
Report Date: 9/23/99
PO No. : N7912-P99264
Project: CTO #68
% Solids: 67
Method: SW8260
Date Analyzed: 8/27/99

Sample Description	Matrix	Sampled Date	Rec'd Date	Ext. Date	Ext'd By	Ext. Method	Analyst
28SLB050203	SL	8/19/99	8/20/99	8/27/99	JSS	5030	JSS

Compound	Result	Units	DF	Sample PQL	Method PQL
BENZENE	<9	ug/Kg	1.8	9	5
TOLUENE	J6	ug/Kg	1.8	9	5
1,2-DIBROMOETHANE	<9	ug/Kg	1.8	9	5
ETHYLBENZENE	<9	ug/Kg	1.8	9	5
NAPHTHALENE	<9	ug/Kg	1.8	9	5
MTBE	<9	ug/Kg	1.8	9	5
TOTAL XYLENES	<9	ug/Kg	1.8	9	5
DIBROMOFLUOROMETHANE	96	%	1.8		
1,2-DICHLOROETHANE-D4	102	%	1.8		
TOLUENE-D8	82	%	1.8		
P-BROMOFLUOROBENZENE	$62	%	1.8		

Report Notes: J, $

KATAHDIN ANALYTICAL SERVICES
REPORT OF ANALYTICAL RESULTS

Client: PAUL CALLIGAN
Tetra Tech NUS
1401 Oven Park Dr.
Suite 102
Tallahassee, FL 32308

Proj. ID: CNC CHARLESTON

Lab Number: WP3683-11
SDG: WP3683
Report Date: 9/23/99
PO No. : N7912-P99264
Project: CTO #68
% Solids: 67
Method: EPA 8270
Date Analyzed: 9/13/99

Sample Description	Matrix	Sampled Date	Rec'd Date	Ext. Date	Ext'd By	Ext. Method	Analyst
28SLB050203	SL	8/19/99	8/20/99	8/23/99	LAP	SW3550	KRT

Compound	Result	Units	DF	Sample PQL	Method PQL
NAPHTHALENE	<500	ug/Kg	1.5	500	330
2-METHYLNAPHTHALENE	<500	ug/Kg	1.5	500	330
ACENAPHTHYLENE	<500	ug/Kg	1.5	500	330
ACENAPHTHENE	<500	ug/Kg	1.5	500	330
FLUORENE	<500	ug/Kg	1.5	500	330
PHENANTHRENE	<500	ug/Kg	1.5	500	330
ANTHRACENE	<500	ug/Kg	1.5	500	330
FLUORANTHENE	<500	ug/Kg	1.5	500	330
PYRENE	<500	ug/Kg	1.5	500	330
BENZO[A]ANTHRACENE	<500	ug/Kg	1.5	500	330
CHRYSENE	<500	ug/Kg	1.5	500	330
BENZO[B]FLUORANTHENE	<500	ug/Kg	1.5	500	330
BENZO[K]FLUORANTHENE	<500	ug/Kg	1.5	500	330
BENZO[A]PYRENE	<500	ug/Kg	1.5	500	330
INDENO[1,2,3-CD]PYRENE	<500	ug/Kg	1.5	500	330
DIBENZ[A,H]ANTHRACENE	<500	ug/Kg	1.5	500	330
BENZO[G,H,I]PERYLENE	<500	ug/Kg	1.5	500	330
NITROBENZENE-D5	47	%	1.5		
2-FLUOROBIPHENYL	58	%	1.5		
TERPHENYL-D14	75	%	1.5		

Report Notes:

0000044

Katahdin
ANALYTICAL SERVICES

Lab Number : WP-3683-11
Report Date: 09/27/99
PO No. : N7912-P99264
Project : CTO #68

CLIENT: PAUL CALLIGAN
Tetra Tech NUS
1401 Oven Park Dr., Suite 102
Tallahassee, FL 32308

WIC#: CNC CHARLESTON

REPORT OF ANALYTICAL RESULTS

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED DATE	RECEIVED
28SLB050203	Solid	CLIENT	08/19/99	08/20/99

PARAMETER	RESULT	UNITS	DF	*PQL	METHOD	ANALYZED	BY	NOTES
Solids-Total Residue (TS)	67.	wt %	1.0	0.10	CLP/CIP SOW	08/25/99	JF	1

* PQL (Practical Quantitation Level) represents laboratory reporting limits and may not reflect sample-specific reporting limits. Sample-specific limits are indicated by results annotated with '<' values.
(1) Sample Preparation on 08/24/99 by JF

09/27/99

LJO/msmajc(dw)
PH24TSS9
CC: MS LEE LECK
TETRA TECH NUS
FOSTER PLAZA 7
661 ANDERSEN DR.

KATAHDIN ANALYTICAL SERVICES
REPORT OF ANALYTICAL RESULTS

Client: PAUL CALLIGAN
Tetra Tech NUS
1401 Oven Park Dr.
Suite 102
Tallahassee, FL 32308

Proj. ID: CNC CHARLESTON

Lab Number: SBLK;082399B
SDG: WP3683
Report Date: 9/23/99
PO No. : N7912-P99264
Project: CTO #68
% Solids: 100
Method: EPA 8270
Date Analyzed: 9/10/99

Sample Description	Matrix	Sampled Date	Rec'd Date	Ext. Date	Ext'd By	Ext. Method	Analyst
SBLK;082399B	SL	-	-	8/23/99	LAP	SW3550	KRT

Compound	Result	Units	DF	Sample PQL	Method PQL
NAPHTHALENE	<330	ug/Kg	1.0	330	330
2-METHYLNAPHTHALENE	<330	ug/Kg	1.0	330	330
ACENAPHTHYLENE	<330	ug/Kg	1.0	330	330
ACENAPHTHENE	<330	ug/Kg	1.0	330	330
FLUORENE	<330	ug/Kg	1.0	330	330
PHENANTHRENE	<330	ug/Kg	1.0	330	330
ANTHRACENE	<330	ug/Kg	1.0	330	330
FLUORANTHENE	<330	ug/Kg	1.0	330	330
PYRENE	<330	ug/Kg	1.0	330	330
IZO[A]ANTHRACENE	<330	ug/Kg	1.0	330	330
HRYSENE	<330	ug/Kg	1.0	330	330
BENZO[B]FLUORANTHENE	<330	ug/Kg	1.0	330	330
BENZO[K]FLUORANTHENE	<330	ug/Kg	1.0	330	330
BENZO[A]PYRENE	<330	ug/Kg	1.0	330	330
INDENO[1,2,3-CD]PYRENE	<330	ug/Kg	1.0	330	330
DIBENZ[A,H]ANTHRACENE	<330	ug/Kg	1.0	330	330
BENZO[G,H,I]PERYLENE	<330	ug/Kg	1.0	330	330
NITROBENZENE-D5	86	%	1.0		
2-FLUOROBIPHENYL	88	%	1.0		
TERPHENYL-D14	109	%	1.0		

ort Notes:

0000060

KATAHDIN ANALYTICAL SERVICES
REPORT OF ANALYTICAL RESULTS

Client: PAUL CALLIGAN
Tetra Tech NUS
1401 Oven Park Dr.
Suite 102
Tallahassee, FL 32308

Proj. ID: CNC CHARLESTON

Lab Number: VBLKM26B
SDG: WP3683
Report Date: 9/23/99
PO No. : N7912-P99264
Project: CTO #68
% Solids: 100
Method: SW8260
Date Analyzed: 8/26/99

Sample Description	Matrix	Sampled Date	Rec'd Date	Ext. Date	Ext'd By	Ext. Method	Analyst
VBLKM26B	SL	-	-	8/26/99	DJP	5030	DJP

Compound	Result	Units	DF	Sample PQL	Method PQL
BENZENE	<5	ug/Kg	1.0	5	5
TOLUENE	<5	ug/Kg	1.0	5	5
1,2-DIBROMOETHANE	<5	ug/Kg	1.0	5	5
ETHYLBENZENE	<5	ug/Kg	1.0	5	5
NAPHTHALENE	J3	ug/Kg	1.0	5	5
MTBE	<5	ug/Kg	1.0	5	5
TOTAL XYLENES	<5	ug/Kg	1.0	5	5
DIBROMOFLUOROMETHANE	104	%	1.0		
1,2-DICHLOROETHANE-D4	95	%	1.0		
TOLUENE-D8	116	%	1.0		
P-BROMOFLUOROBENZENE	114	%	1.0		

Report Notes: J

KATAHDIN ANALYTICAL SERVICES
REPORT OF ANALYTICAL RESULTS

Client: PAUL CALLIGAN
Tetra Tech NUS
1401 Oven Park Dr.
Suite 102
Tallahassee, FL 32308

Proj. ID: CNC CHARLESTON

Lab Number: VBLKU27A
SDG: WP3683
Report Date: 9/23/99
PO No. : N7912-P99264
Project: CTO #68
% Solids: 100
Method: SW8260
Date Analyzed: 8/27/99

Sample Description	Matrix	Sampled Date	Rec'd Date	Ext. Date	Ext'd By	Ext. Method	Analyst
VBLKU27A	SL	-	-	8/27/99	JSS	5030	JSS

Compound	Result	Units	DF	Sample PQL	Method PQL
BENZENE	<5	ug/Kg	1.0	5	5
TOLUENE	<5	ug/Kg	1.0	5	5
1,2-DIBROMOETHANE	<5	ug/Kg	1.0	5	5
ETHYLBENZENE	<5	ug/Kg	1.0	5	5
NAPHTHALENE	<5	ug/Kg	1.0	5	5
MTBE	<5	ug/Kg	1.0	5	5
TOTAL XYLENES	<5	ug/Kg	1.0	5	5
DIBROMOFLUOROMETHANE	104	%	1.0		
1,2-DICHLOROETHANE-D4	107	%	1.0		
)LUENE-D8	93	%	1.0		
⁄-BROMOFLUOROBENZENE	89	%	1.0		

eport Notes:

KATAHDIN ANALYTICAL SERVICES
REPORT OF ANALYTICAL RESULTS

Client: PAUL CALLIGAN
Tetra Tech NUS
1401 Oven Park Dr.
Suite 102
Tallahassee, FL 32308

Proj. ID: CNC CHARLESTON

Lab Number: VBLKU28A
SDG: WP3683
Report Date: 9/23/99
PO No. : N7912-P99264
Project: CTO #68
% Solids: 100
Method: SW8260
Date Analyzed: 8/28/99

Sample Description	Matrix	Sampled Date	Rec'd Date	Ext. Date	Ext'd By	Ext. Method	Analyst
VBLKU28A	SL	-	-	8/28/99	JSS	5030	JSS

Compound	Result	Units	DF	Sample PQL	Method PQL
BENZENE	<5	ug/Kg	1.0	5	5
TOLUENE	<5	ug/Kg	1.0	5	5
1,2-DIBROMOETHANE	<5	ug/Kg	1.0	5	5
ETHYLBENZENE	<5	ug/Kg	1.0	5	5
NAPHTHALENE	<5	ug/Kg	1.0	5	5
MTBE	<5	ug/Kg	1.0	5	5
TOTAL XYLENES	<5	ug/Kg	1.0	5	5
DIBROMOFLUOROMETHANE	107	%	1.0		
1,2-DICHLOROETHANE-D4	110	%	1.0		
TOLUENE-D8	101	%	1.0		
P-BROMOFLUOROBENZENE	94	%	1.0		

Report Notes:

Katahdin ANALYTICAL SERVICES
340 County Road No. 5
P.O. Box 720
Westbrook, ME 04098
Tel: (207) 874-2400
Fax: (207) 775-4029

CHAIN of CUSTODY

PLEASE PRINT IN PEN

Client: Tetra Tech NUS | Contact: Bryn Howze | Phone #: (843) 554-4925 | Fax #: ( )

Address: N1121 Ave. H | City: N. Charleston | State: SC | Zip Code:

Purchase Order # | Proj. Name / No. | Katahdin Quote #

Bill (if different than above) | Address

Sampler (Print / Sign) | Copies To:

LAB USE ONLY | WORK ORDER #: NP 3683 -

KATAHDIN PROJECT MANAGER

REMARKS:

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO: 813402904473

TEMP°C ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

ANALYSIS AND CONTAINER TYPE PRESERVATIVES

★	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	BTEX, EDB, Naph (Filt. ☐Y☐N)	PAH (Filt. ☐Y☐N)	Grain size (Filt. ☐Y☐N)	FOC (Filt. ☐Y☐N)	Total metals (Filt. ☐Y☐N)	(Filt. ☐Y☐N)	(Filt. ☐Y☐N)	(Filt. ☐Y☐N)	(Filt. ☐Y☐N)	(Filt. ☐Y☐N)
	30SLB330506	8/19/99/0915	soil	5	4	1						408 ppm		
	30SLB210708	8/19/99/1000	soil	5	4	1						1270 ppm		
	30SLB200607	8/19/99/1025	soil	5	4	1						3 ppm		
	28SLB020102	8/19/99/1325	soil	5	4	1						0 ppm		
★	28SLB030102	8/19/99/1410	soil	6	4	1	1	✓				0 ppm		
★	28SLB030102D	8/19/99/	soil	5	4	1		✓				0 ppm		
★	28SLB030102M	8/19/99/1410	soil	5	4	1		✓	-MS/MSD			0 ppm		
	24SLB120102	8/19/99/1545	soil	5	4	1			✓			0 ppm		
	24SLB110102	8/19/99/1600	soil	5	4	1			✓			0 ppm		
	30TL00101	8/19/99/	aq	2	2									
	31GLM0601	8/19/99/1740	aq	5	3	2								
	28SLB050203	8/19/99/1545	soil	5	4	1								
		/												
		/												
		/												
		/												

COMMENTS

* These samples also need to be tested for FOC from the 4oz PAH jar.

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
		813402 904473		8-20-99 0845	
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

General Engineering Laboratories, Inc.
2040 Savage Road
Charleston, South Carolina 29407
P.O. Box 30712
Charleston, South Carolina 29417
(803) 556-8171

CHAIN OF CUSTODY RECORD

9908592/.

Page 1 of 1

Client Name/Facility Name: Katahdin Analytical

Collected by/Company: J.R. Hill Tetra Tech

SAMPLE ANALYSIS REQUIRED (x) - use remarks area to specify specific compounds or methods

Use F or P in the boxes to indicate whether sample was filtered and/or preserved

	SAMPLE ID	DATE	TIME	WELL	SOIL	COMP	GRAB	# OF CONTAINERS	pH, conductivity	TOC	TOX	Chloride, Fluoride, Sulfide	Nitrite/Nitrate	VOC - Specify Method required	METALS - specify	Pesticide	Herbicide	Total Phenol	Acid Extractables	B/N Extractables	PCB's	Cyanide	Coliform - specify type	TPH		Remarks
-01	125LB011415	8/17/99	1550		X		X			1														1		0 ppm
02	125LB011415D	↓	1550		X		X			1														1		0 ppm

4/2063

Relinquished by:	Date:	Time:	Received by:	Relinquished by:	Date:	Time:	Received by:
James R Hill	8/17/99	1815					
Relinquished by:	Date:	Time:	Received by lab by:	Date: 1815	Time: 8/17/99	Remarks:	
			Rfiacco				

White = sample collector Yellow = file Pink = with report

Katahdin ANALYTICAL SERVICES

340 County Road No. 5
P.O. Box 720
Westbrook, ME 04098
Tel: (207) 874-2400
Fax: (207) 775-4029

9908592
9908507

CHAIN of CUSTODY

PLEASE PRINT IN PEN

Page ____ of ____

Client	Contact	Phone #	Fax #
Katahdin Analytical		(207) 874-2400	(207) 775-4029

Address: 340 County Rd. No. 5 City: Westbrook State: Me Zip Code: 04098

Purchase Order # Proj. Name / No. Katahdin Quote #

Bill (if different than above) Address

Sampler (Print / Sign): Tetra Tech NUS Inc. Copies To:

LAB USE ONLY

WORK ORDER #:

KATAHDIN PROJECT MANAGER

REMARKS:

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT

AIRBILL NO:

TEMP°C ____ ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

ANALYSIS AND CONTAINER TYPE / PRESERVATIVES

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	TPH (Filt. ○Y○N)	TOC (Filt. ○Y○N)	Filt. ○Y○N	Filt. ○Y○N	Filt. ○Y○N	Filt. ○Y○N	Filt. ○Y○N	Filt. ○Y○N	Filt. ○Y○N	Filt. ○Y○N
03	225LB110708	8/19/1500	Soil	2	1	1								
04	225LB110708D	↓ /1500	"	2	1	1								
		/												
		/												
		/												
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		/												

COMMENTS

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
[signature]	8/19/99 [illegible]	[signature]			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
		8/19/99 8:00			

FORMSOURCE INC. ☎ (207) 782-3311
FORM # CHN-OF-CSTDY

FILE COPY

General Engineering Laboratories, Inc.
2040 Savage Road
Charleston, South Carolina 29407
P.O. Box 30712
Charleston, South Carolina 29417
(803) 556-8171

CHAIN OF CUSTODY RECORD

99085927.

Client Name/Facility Name: Katahdin Analytical

Collected by/Company: Tetra Tech NUS

SAMPLE ANALYSIS REQUIRED (x) - use remarks area to specify specific compounds or methods

Use F or P in the boxes to indicate whether sample was filtered and/or preserved

	SAMPLE ID	DATE	TIME	WELL	SOIL	COMP	GRAB	# OF CONTAINERS	pH, conductivity	TOC/~~BOD~~	TOX	Chloride, Fluoride, Sulfide	Nitrite/Nitrate	VOC - Specify Method required	METALS - specify	Pesticide	Herbicide	Total Phenol	Acid Extractables	B/N Extractables	PCB's	Cyanide	Coliform - specify type	TPH		Remarks
05	28SLB030102	8/19/99	1410		X			2		1														1		- 0 ppm
06	28SLB030102D	8/19/99	1410		X			2		1														1		0 ppm
07	28SLB030102M	8/19/99	1410		X			2		1														1		- MS/MSD 0 ppm

42063
~~42138~~

Relinquished by:	Date:	Time:	Received by:	Relinquished by:	Date:	Time:	Received by:
[signature]	8/19/99	1731	[signature]				

Relinquished by:	Date:	Time:	Received by lab by:	Date:	Time:	Remarks:
			Francis	8/19/99	1731	

White = sample collector Yellow = file Pink = with report

KATAHDIN ANALYTICAL SERVICES

Summary of Report Notes

Report Note	Note Text
$	'$' flag denotes surrogate compound recovery is out of criteria. Re-extraction or re-analysis confirmed matrix interference.
E	'E' flag indicates an estimated value. The analyte was detected in the sample at a concentration greater than the standard calibration range.
J	'J' flag denotes an estimated value less than the Laboratory's Practical Quantitation Level.
O-1	Sample dilution required due to matrix interference, sample viscosity or other matrix-related problem; therefore, standard laboratory Practical Quantitation Level (PQL) could not be achieved.
O-13	Internal standard area(s) are out of criteria. Reanalysis confirmedmatrix interference.
O-2	Sample dilution required for quantitation of one or more target analytes; therefore, standard laboratory Practical Quantitation Level (PQL) could not be achieved.

KATAHDIN ANALYTICAL SERVICES

Summary of Report Notes

Report Note	Note Text
DL	'DL' flag denotes inability to calculate surrogate recovery due to sample dilution.
E	'E' flag indicates an estimated value. The analyte was detected in the sample at a concentration greater than the standard calibration range.
J	'J' flag denotes an estimated value less than the Laboratory's Practical Quantitation Level.
O-1	Sample dilution required due to matrix interference, sample viscosity or other matrix-related problem; therefore, standard laboratory Practical Quantitation Level (PQL) could not be achieved.
O-2	Sample dilution required for quantitation of one or more target analytes; therefore, standard laboratory Practical Quantitation Level (PQL) could not be achieved.

S. W. COLE ENGINEERING, INC.

REPORT OF GRADATION
ASTM C-117, C-136

Project No. 99008
Date 08/24/1999

Project MISCELLANEOUS

Client KATAHDIN ANALYTICAL

Sample No. 38, SILTY SAND, WP3683-3

Sieve Size	Percent Passing	PROJECT Specifications %
1/2 "	100.0	
1/4 "	99.8	
# 4	99.7	
# 10	99.3	
# 20	98.4	
# 40	97.0	
# 60	93.3	
# 100	44.7	
# 200	12.7	

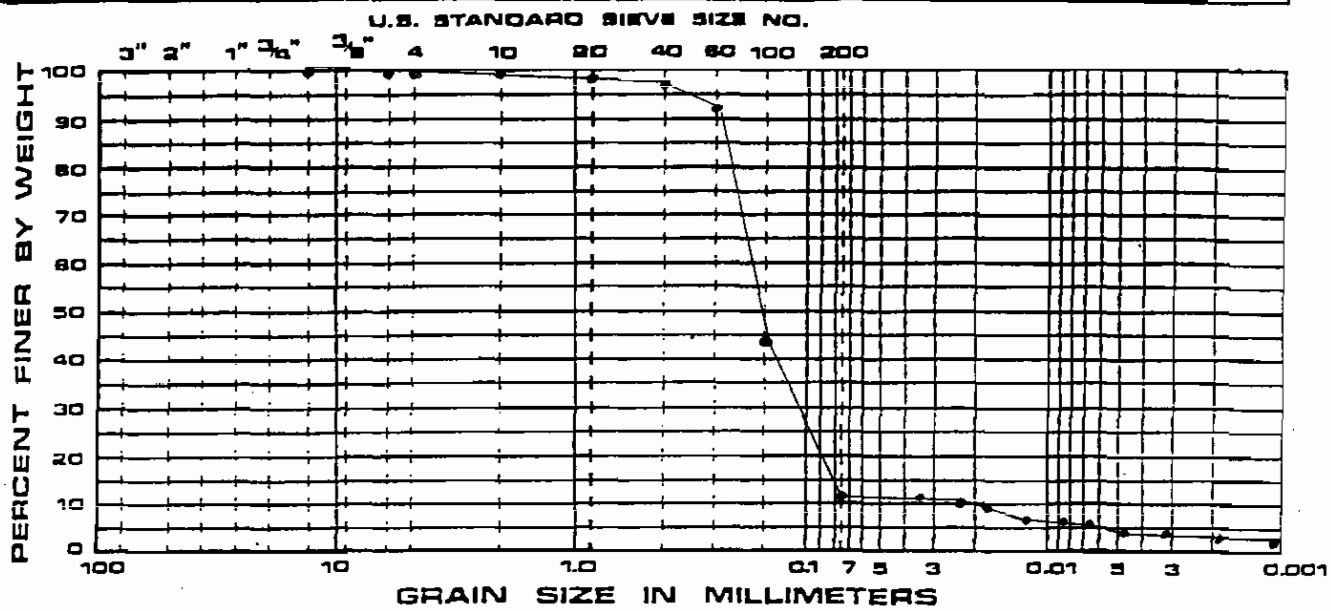
HYDROMETER ANALYSIS

JOB NO.99008 BORING NO. SAMPLE NO.38

DIAMETER	% PASSING	READING
.0341188	12.19663	12.3
2.462948E-02	10.17982	10.2
1.749943E-02	9.699541	9.7
1.300959E-02	7.874842	7.8
9.249895E-03	7.298627	7.2
6.617709E-03	6.050142	5.9
4.729159E-03	4.897598	4.7
3.34402E-03	4.897598	4.7
1.87743E-03	3.553058	3.3
1.384101E-03	3.361063	3.1

GRAIN SIZE ANALYSIS

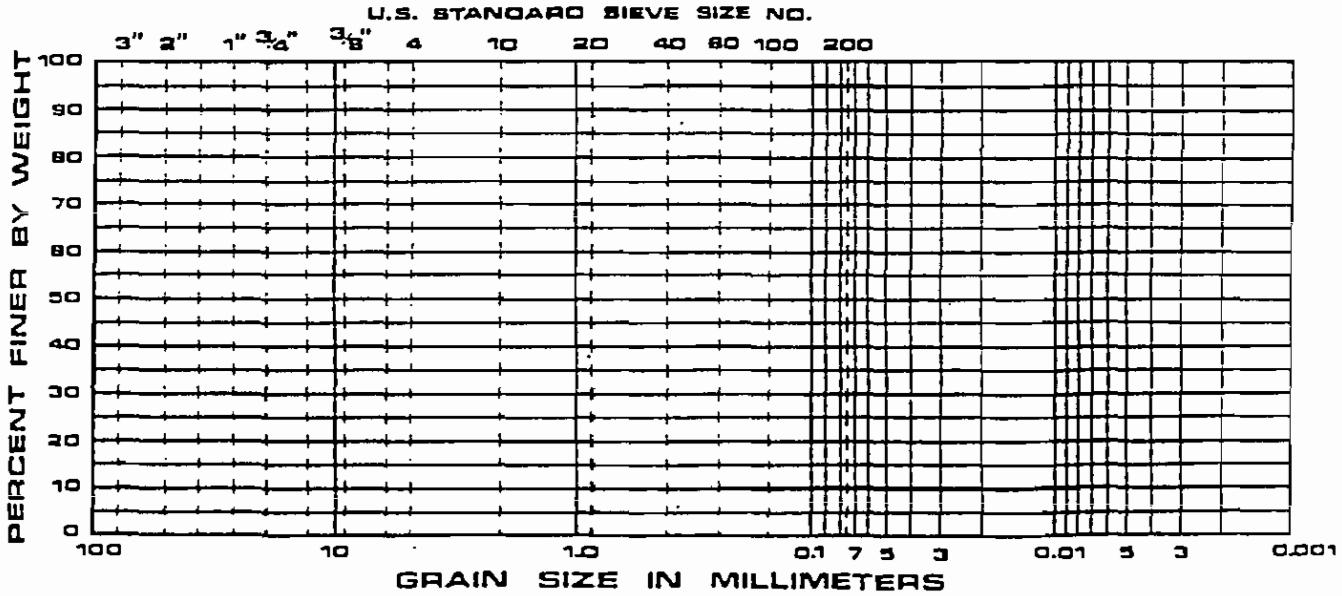
COBBLE	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COA.	MEDIUM	FINE	



PLOT	SOURCE	SAMP.	DEPTH	CLASSIFICATION		W
•	WP9/89-9	C38				

GRAIN SIZE ANALYSIS

COBBLE	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COA.	MEDIUM	FINE	



PLOT	SOURCE	SAMP.	DEPTH	CLASSIFICATION		W

APPENDIX B

GROUNDWATER LABORATORY ANALYTICAL DATA

Katahdin
ANALYTICAL SERVICES

CLIENT: Paul Calligan
Tetra Tech NUS
1401 Oven Park Dr., Suite 102
Tallahassee, FL 32308

Lab Number : WP-4075-39
Report Date: 10/27/99
PO No. : N7912-P99264
Project : CTO #68

WIC#: CNC CHARLESTON

REPORT OF ANALYTICAL RESULTS

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED DATE	RECEIVED
28GLM0101	Aqueous	CLIENT	09/24/99	09/25/99

PARAMETER	RESULT	UNITS	DF	*PQL	METHOD	ANALYZED	BY	NOTES
Nitrate as N	0.055	mg/L	1.0	0.050	353.2	09/25/99	KW	
Sulfate	16.	mg/L	2.0	1.0	375.4	10/12/99	KW	

* PQL (Practical Quantitation Level) represents laboratory reporting limits and may not reflect sample-specific reporting limits. Sample-specific limits are indicated by results annotated with '<' values.

10/27/99

LJO/baeajc(dw)/msm
PI25NOW2
CC: MS. LEE LECK
TETRATECH NUS
FOSTER PLAZA 7
661 ANDERSEN DR.

KATAHDIN ANALYTICAL SERVICES
REPORT OF ANALYTICAL RESULTS

Client: Paul Calligan
Tetra Tech NUS
1401 Oven Park Dr.
Suite 102
Tallahassee, FL 32308

Proj. ID: CNC CHARLESTON

Lab Number: WP4075-39
SDG: WP4075
Report Date: 10/9/99
PO No. : N7912-P99264
Project: CTO #68
% Solids: N/A
Method: EPA 8270
Date Analyzed: 10/5/99

Sample Description	Matrix	Sampled Date	Rec'd Date	Ext. Date	Ext'd By	Ext. Method	Analyst
28GLM0101	AQ	9/24/99	9/25/99	9/28/99	DS	SW3510	KRT

Compound	Result	Units	DF	Sample PQL	Method PQL
NAPHTHALENE	<12	ug/L	1.2	12	10
2-METHYLNAPHTHALENE	<12	ug/L	1.2	12	10
ACENAPHTHYLENE	<12	ug/L	1.2	12	10
ACENAPHTHENE	<12	ug/L	1.2	12	10
FLUORENE	<12	ug/L	1.2	12	10
PHENANTHRENE	<12	ug/L	1.2	12	10
ANTHRACENE	<12	ug/L	1.2	12	10
FLUORANTHENE	<12	ug/L	1.2	12	10
PYRENE	<12	ug/L	1.2	12	10
BENZO[A]ANTHRACENE	<12	ug/L	1.2	12	10
CHRYSENE	<12	ug/L	1.2	12	10
BENZO[B]FLUORANTHENE	<12	ug/L	1.2	12	10
BENZO[K]FLUORANTHENE	<12	ug/L	1.2	12	10
BENZO[A]PYRENE	<12	ug/L	1.2	12	10
INDENO[1,2,3-CD]PYRENE	<12	ug/L	1.2	12	10
DIBENZ[A,H]ANTHRACENE	<12	ug/L	1.2	12	10
BENZO[G,H,I]PERYLENE	<12	ug/L	1.2	12	10
NITROBENZENE-D5	90	%	1.2		
2-FLUOROBIPHENYL	93	%	1.2		
TERPHENYL-D14	88	%	1.2		

Report Notes: A-1

KATAHDIN ANALYTICAL SERVICES
REPORT OF ANALYTICAL RESULTS

Client: Paul Calligan
Tetra Tech NUS
1401 Oven Park Dr.
Suite 102
Tallahassee, FL 32308

Proj. ID: CNC CHARLESTON

Lab Number: WP4075-39
SDG: WP4075
Report Date: 10/15/99
PO No. : N7912-P99264
Project: CTO #68
% Solids: N/A
Method: SW8260
Date Analyzed: 9/28/99

Sample Description	Matrix	Sampled Date	Rec'd Date	Ext. Date	Ext'd By	Ext. Method	Analyst
28GLM0101	AQ	9/24/99	9/25/99	9/28/99	HMP	5030	HMP

Compound	Result	Units	DF	Sample PQL	Method PQL
BENZENE	<5	ug/L	1.0	5	5
TOLUENE	<5	ug/L	1.0	5	5
1,2-DIBROMOETHANE	<5	ug/L	1.0	5	5
ETHYLBENZENE	<5	ug/L	1.0	5	5
NAPHTHALENE	<5	ug/L	1.0	5	5
MTBE	<5	ug/L	1.0	5	5
TOTAL XYLENES	<5	ug/L	1.0	5	5
DIBROMOFLUOROMETHANE	104	%	1.0		
1,2-DICHLOROETHANE-D4	106	%	1.0		
TOLUENE-D8	101	%	1.0		
P-BROMOFLUOROBENZENE	100	%	1.0		

Report Notes:

Katahdin
ANALYTICAL SERVICES

Lab Number : WP-4075-8
Report Date: 10/27/99
PO No. : N7912-P99264
Project : CTO #68

CLIENT: Paul Calligan
Tetra Tech NUS
1401 Oven Park Dr., Suite 102
Tallahassee, FL 32308

WIC#: CNC CHARLESTON

REPORT OF ANALYTICAL RESULTS

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED DATE	RECEIVED
28GLM0201	Aqueous	CLIENT	09/23/99	09/24/99

PARAMETER	RESULT	UNITS	DF	*PQL	METHOD	ANALYZED	BY	NOTES
Nitrate as N	<0.050	mg/L	1.0	0.050	353.2	09/24/99	KW	
Sulfate	87.	mg/L	10	1.0	375.4	10/12/99	KW	

* PQL (Practical Quantitation Level) represents laboratory reporting limits and may not reflect sample-specific reporting limits. Sample-specific limits are indicated by results annotated with '<' values.

10/27/99

LJO/baeajc(dw)/msm
PI24NOW2
CC: MS. LEE LECK
TETRATECH NUS
FOSTER PLAZA 7
661 ANDERSEN DR.

KATAHDIN ANALYTICAL SERVICES
REPORT OF ANALYTICAL RESULTS

Client: Paul Calligan
Tetra Tech NUS
1401 Oven Park Dr.
Suite 102
Tallahassee, FL 32308

Proj. ID: CNC CHARLESTON

Lab Number: WP4075-8
SDG: WP4075
Report Date: 10/9/99
PO No. : N7912-P99264
Project: CTO #68
% Solids: N/A
Method: EPA 8270
Date Analyzed: 10/5/99

Sample Description	Matrix	Sampled Date	Rec'd Date	Ext. Date	Ext'd By	Ext. Method	Analyst
28GLM0201	AQ	9/23/99	9/24/99	9/28/99	DS	SW3510	KRT

Compound	Result	Units	DF	Sample PQL	Method PQL
NAPHTHALENE	<11	ug/L	1.1	11	10
2-METHYLNAPHTHALENE	<11	ug/L	1.1	11	10
ACENAPHTHYLENE	<11	ug/L	1.1	11	10
ACENAPHTHENE	<11	ug/L	1.1	11	10
FLUORENE	<11	ug/L	1.1	11	10
PHENANTHRENE	<11	ug/L	1.1	11	10
ANTHRACENE	<11	ug/L	1.1	11	10
FLUORANTHENE	<11	ug/L	1.1	11	10
PYRENE	<11	ug/L	1.1	11	10
ENZO[A]ANTHRACENE	<11	ug/L	1.1	11	10
CHRYSENE	<11	ug/L	1.1	11	10
BENZO[B]FLUORANTHENE	<11	ug/L	1.1	11	10
BENZO[K]FLUORANTHENE	<11	ug/L	1.1	11	10
BENZO[A]PYRENE	<11	ug/L	1.1	11	10
INDENO[1,2,3-CD]PYRENE	<11	ug/L	1.1	11	10
DIBENZ[A,H]ANTHRACENE	<11	ug/L	1.1	11	10
BENZO[G,H,I]PERYLENE	<11	ug/L	1.1	11	10
NITROBENZENE-D5	72	%	1.1		
2-FLUOROBIPHENYL	75	%	1.1		
TERPHENYL-D14	82	%	1.1		

eport Notes: A-1

KATAHDIN ANALYTICAL SERVICES
REPORT OF ANALYTICAL RESULTS

Client: Paul Calligan
Tetra Tech NUS
1401 Oven Park Dr.
Suite 102
Tallahassee, FL 32308

Proj. ID: CNC CHARLESTON

Lab Number: WP4075-44
SDG: WP4075
Report Date: 10/15/99
PO No. : N7912-P99264
Project: CTO #68
% Solids: N/A
Method: SW8260
Date Analyzed: 9/28/99

Sample Description	Matrix	Sampled Date	Rec'd Date	Ext. Date	Ext'd By	Ext. Method	Analyst
28GLM0201	AQ	9/23/99	9/25/99	9/28/99	HMP	5030	HMP

Compound	Result	Units	DF	Sample PQL	Method PQL
BENZENE	<5	ug/L	1.0	5	5
TOLUENE	<5	ug/L	1.0	5	5
1,2-DIBROMOETHANE	<5	ug/L	1.0	5	5
ETHYLBENZENE	<5	ug/L	1.0	5	5
NAPHTHALENE	<5	ug/L	1.0	5	5
MTBE	<5	ug/L	1.0	5	5
TOTAL XYLENES	<5	ug/L	1.0	5	5
DIBROMOFLUOROMETHANE	108	%	1.0		
1,2-DICHLOROETHANE-D4	110	%	1.0		
TOLUENE-D8	102	%	1.0		
P-BROMOFLUOROBENZENE	102	%	1.0		

Report Notes:

KATAHDIN ANALYTICAL SERVICES
REPORT OF ANALYTICAL RESULTS

Client: Paul Calligan
Tetra Tech NUS
1401 Oven Park Dr.
Suite 102
Tallahassee, FL 32308

Proj. ID: CNC CHARLESTON

Lab Number: WP4075-4
SDG: WP4075
Report Date: 10/9/99
PO No. : N7912-P99264
Project: CTO #68
% Solids: N/A
Method: EPA 8270
Date Analyzed: 10/4/99

Sample Description	Matrix	Sampled Date	Rec'd Date	Ext. Date	Ext'd By	Ext. Method	Analyst
28GLM0201D	AQ	9/23/99	9/24/99	9/28/99	DS	SW3510	KRT

Compound	Result	Units	DF	Sample PQL	Method PQL
NAPHTHALENE	<11	ug/L	1.1	11	10
2-METHYLNAPHTHALENE	<11	ug/L	1.1	11	10
ACENAPHTHYLENE	<11	ug/L	1.1	11	10
ACENAPHTHENE	<11	ug/L	1.1	11	10
FLUORENE	<11	ug/L	1.1	11	10
PHENANTHRENE	<11	ug/L	1.1	11	10
ANTHRACENE	<11	ug/L	1.1	11	10
FLUORANTHENE	<11	ug/L	1.1	11	10
PYRENE	<11	ug/L	1.1	11	10
NZO[A]ANTHRACENE	<11	ug/L	1.1	11	10
CHRYSENE	<11	ug/L	1.1	11	10
BENZO[B]FLUORANTHENE	<11	ug/L	1.1	11	10
BENZO[K]FLUORANTHENE	<11	ug/L	1.1	11	10
BENZO[A]PYRENE	<11	ug/L	1.1	11	10
INDENO[1,2,3-CD]PYRENE	<11	ug/L	1.1	11	10
DIBENZ[A,H]ANTHRACENE	<11	ug/L	1.1	11	10
BENZO[G,H,I]PERYLENE	<11	ug/L	1.1	11	10
NITROBENZENE-D5	72	%	1.1		
2-FLUOROBIPHENYL	80	%	1.1		
TERPHENYL-D14	86	%	1.1		

Report Notes: A-1

KATAHDIN ANALYTICAL SERVICES
REPORT OF ANALYTICAL RESULTS

Client: Paul Calligan
Tetra Tech NUS
1401 Oven Park Dr.
Suite 102
Tallahassee, FL 32308

Proj. ID: CNC CHARLESTON

Lab Number: WP4075-45
SDG: WP4075
Report Date: 10/15/99
PO No. : N7912-P99264
Project: CTO #68
% Solids: N/A
Method: SW8260
Date Analyzed: 9/29/99

Sample Description	Matrix	Sampled Date	Rec'd Date	Ext. Date	Ext'd By	Ext. Method	Analyst
28GLM0201D	AQ	9/23/99	9/25/99	9/29/99	KMC	5030	KMC

Compound	Result	Units	DF	Sample PQL	Method PQL
BENZENE	<5	ug/L	1.0	5	5
TOLUENE	<5	ug/L	1.0	5	5
1,2-DIBROMOETHANE	<5	ug/L	1.0	5	5
ETHYLBENZENE	<5	ug/L	1.0	5	5
NAPHTHALENE	<5	ug/L	1.0	5	5
MTBE	<5	ug/L	1.0	5	5
TOTAL XYLENES	<5	ug/L	1.0	5	5
DIBROMOFLUOROMETHANE	113	%	1.0		
1,2-DICHLOROETHANE-D4	106	%	1.0		
TOLUENE-D8	104	%	1.0		
P-BROMOFLUOROBENZENE	84	%	1.0		

Report Notes:

Katahdin
ANALYTICAL SERVICES

CLIENT: Paul Calligan
Tetra Tech NUS
1401 Oven Park Dr., Suite 102
Tallahassee, FL 32308

Lab Number : WP-4075-9
Report Date: 10/27/99
PO No. : N7912-P99264
Project : CTO #68

WIC#: CNC CHARLESTON

REPORT OF ANALYTICAL RESULTS

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED DATE	RECEIVED
28GLM0301	Aqueous	CLIENT	09/23/99	09/24/99

PARAMETER	RESULT	UNITS	DF	*PQL	METHOD	ANALYZED	BY	NOTES
Nitrate as N	<0.050	mg/L	1.0	0.050	353.2	09/24/99	KW	
Sulfate	8.1	mg/L	2.0	1.0	375.4	10/12/99	KW	

* PQL (Practical Quantitation Level) represents laboratory reporting limits and may not reflect sample-specific reporting limits. Sample-specific limits are indicated by results annotated with '<' values.

10/27/99

LJO/baeajc(dw)/msm
PI24NOW2
CC: MS. LEE LECK
TETRATECH NUS
FOSTER PLAZA 7
661 ANDERSEN DR.

KATAHDIN ANALYTICAL SERVICES
REPORT OF ANALYTICAL RESULTS

Client: Paul Calligan
Tetra Tech NUS
1401 Oven Park Dr.
Suite 102
Tallahassee, FL 32308

Proj. ID: CNC CHARLESTON

Lab Number: WP4075-9
SDG: WP4075
Report Date: 10/9/99
PO No. : N7912-P99264
Project: CTO #68
% Solids: N/A
Method: EPA 8270
Date Analyzed: 10/5/99

Sample Description	Matrix	Sampled Date	Rec'd Date	Ext. Date	Ext'd By	Ext. Method	Analyst
28GLM0301	AQ	9/23/99	9/24/99	9/28/99	DS	SW3510	KRT

Compound	Result	Units	DF	Sample PQL	Method PQL
NAPHTHALENE	<11	ug/L	1.1	11	10
2-METHYLNAPHTHALENE	<11	ug/L	1.1	11	10
ACENAPHTHYLENE	<11	ug/L	1.1	11	10
ACENAPHTHENE	<11	ug/L	1.1	11	10
FLUORENE	<11	ug/L	1.1	11	10
PHENANTHRENE	<11	ug/L	1.1	11	10
ANTHRACENE	<11	ug/L	1.1	11	10
FLUORANTHENE	<11	ug/L	1.1	11	10
PYRENE	<11	ug/L	1.1	11	10
BENZO[A]ANTHRACENE	<11	ug/L	1.1	11	10
CHRYSENE	<11	ug/L	1.1	11	10
BENZO[B]FLUORANTHENE	<11	ug/L	1.1	11	10
BENZO[K]FLUORANTHENE	<11	ug/L	1.1	11	10
BENZO[A]PYRENE	<11	ug/L	1.1	11	10
INDENO[1,2,3-CD]PYRENE	<11	ug/L	1.1	11	10
DIBENZ[A,H]ANTHRACENE	<11	ug/L	1.1	11	10
BENZO[G,H,I]PERYLENE	<11	ug/L	1.1	11	10
NITROBENZENE-D5	80	%	1.1		
2-FLUOROBIPHENYL	83	%	1.1		
TERPHENYL-D14	89	%	1.1		

Report Notes: A-1

KATAHDIN ANALYTICAL SERVICES
REPORT OF ANALYTICAL RESULTS

Client: Paul Calligan
Tetra Tech NUS
1401 Oven Park Dr.
Suite 102
Tallahassee, FL 32308

Proj. ID: CNC CHARLESTON

Lab Number: WP4075-43
SDG: WP4075
Report Date: 10/15/99
PO No. : N7912-P99264
Project: CTO #68
% Solids: N/A
Method: SW8260
Date Analyzed: 9/28/99

Sample Description	Matrix	Sampled Date	Rec'd Date	Ext. Date	Ext'd By	Ext. Method	Analyst
28GLM0301	AQ	9/23/99	9/25/99	9/28/99	HMP	5030	HMP

Compound	Result	Units	DF	Sample PQL	Method PQL
BENZENE	<5	ug/L	1.0	5	5
TOLUENE	<5	ug/L	1.0	5	5
1,2-DIBROMOETHANE	<5	ug/L	1.0	5	5
ETHYLBENZENE	<5	ug/L	1.0	5	5
NAPHTHALENE	<5	ug/L	1.0	5	5
MTBE	<5	ug/L	1.0	5	5
TOTAL XYLENES	<5	ug/L	1.0	5	5
DIBROMOFLUOROMETHANE	104	%	1.0		
1,2-DICHLOROETHANE-D4	107	%	1.0		
TOLUENE-D8	102	%	1.0		
4-BROMOFLUOROBENZENE	101	%	1.0		

Report Notes:

KATAHDIN ANALYTICAL SERVICES
REPORT OF ANALYTICAL RESULTS

Client: Paul Calligan
Tetra Tech NUS
1401 Oven Park Dr.
Suite 102
Tallahassee, FL 32308

Proj. ID: CNC CHARLESTON

Lab Number: SBLK;092899
SDG: WP4075
Report Date: 10/9/99
PO No. : N7912-P99264
Project: CTO #68
% Solids: N/A
Method: EPA 8270
Date Analyzed: 10/4/99

Sample Description	Matrix	Sampled Date	Rec'd Date	Ext. Date	Ext'd By	Ext. Method	Analyst
SBLK;092899	AQ	-	-	9/28/99	DS	SW3510	KRT

Compound	Result	Units	DF	Sample PQL	Method PQL
NAPHTHALENE	<10	ug/L	1.0	10	10
2-METHYLNAPHTHALENE	<10	ug/L	1.0	10	10
ACENAPHTHYLENE	<10	ug/L	1.0	10	10
ACENAPHTHENE	<10	ug/L	1.0	10	10
FLUORENE	<10	ug/L	1.0	10	10
PHENANTHRENE	<10	ug/L	1.0	10	10
ANTHRACENE	<10	ug/L	1.0	10	10
FLUORANTHENE	<10	ug/L	1.0	10	10
PYRENE	<10	ug/L	1.0	10	10
BENZO[A]ANTHRACENE	<10	ug/L	1.0	10	10
CHRYSENE	<10	ug/L	1.0	10	10
BENZO[B]FLUORANTHENE	<10	ug/L	1.0	10	10
BENZO[K]FLUORANTHENE	<10	ug/L	1.0	10	10
BENZO[A]PYRENE	<10	ug/L	1.0	10	10
INDENO[1,2,3-CD]PYRENE	<10	ug/L	1.0	10	10
DIBENZ[A,H]ANTHRACENE	<10	ug/L	1.0	10	10
BENZO[G,H,I]PERYLENE	<10	ug/L	1.0	10	10
NITROBENZENE-D5	87	%	1.0		
2-FLUOROBIPHENYL	90	%	1.0		
TERPHENYL-D14	114	%	1.0		

Report Notes:

KATAHDIN ANALYTICAL SERVICES
REPORT OF ANALYTICAL RESULTS

Client: Paul Calligan
Tetra Tech NUS
1401 Oven Park Dr.
Suite 102
Tallahassee, FL 32308

Proj. ID: CNC CHARLESTON

Lab Number: VBLKU04A
SDG: WP4075
Report Date: 10/15/99
PO No. : N7912-P99264
Project: CTO #68
% Solids: N/A
Method: SW8260
Date Analyzed: 10/4/99

Sample Description	Matrix	Sampled Date	Rec'd Date	Ext. Date	Ext'd By	Ext. Method	Analyst
VBLKU04A	AQ	-	-	10/4/99	KMC	5030	KMC

Compound	Result	Units	DF	Sample PQL	Method PQL
BENZENE	<5	ug/L	1.0	5	5
TOLUENE	<5	ug/L	1.0	5	5
1,2-DIBROMOETHANE	<5	ug/L	1.0	5	5
ETHYLBENZENE	<5	ug/L	1.0	5	5
NAPHTHALENE	<5	ug/L	1.0	5	5
MTBE	<5	ug/L	1.0	5	5
TOTAL XYLENES	<5	ug/L	1.0	5	5
DIBROMOFLUOROMETHANE	94	%	1.0		
1,2-DICHLOROETHANE-D4	82	%	1.0		
TOLUENE-D8	99	%	1.0		
P-BROMOFLUOROBENZENE	104	%	1.0		

Report Notes:

0000146

KATAHDIN ANALYTICAL SERVICES
REPORT OF ANALYTICAL RESULTS

Client: Paul Calligan
Tetra Tech NUS
1401 Oven Park Dr.
Suite 102
Tallahassee, FL 32308

Proj. ID: CNC CHARLESTON

Lab Number: VBLKS29A
SDG: WP4075
Report Date: 10/15/99
PO No. : N7912-P99264
Project: CTO #68
% Solids: N/A
Method: SW8260
Date Analyzed: 9/29/99

Sample Description	Matrix	Sampled Date	Rec'd Date	Ext. Date	Ext'd By	Ext. Method	Analyst
VBLKS29A	AQ	-	-	9/29/99	KMC	5030	KMC

Compound	Result	Units	DF	Sample PQL	Method PQL
BENZENE	<5	ug/L	1.0	5	5
TOLUENE	<5	ug/L	1.0	5	5
1,2-DIBROMOETHANE	<5	ug/L	1.0	5	5
ETHYLBENZENE	<5	ug/L	1.0	5	5
NAPHTHALENE	<5	ug/L	1.0	5	5
MTBE	<5	ug/L	1.0	5	5
TOTAL XYLENES	<5	ug/L	1.0	5	5
DIBROMOFLUOROMETHANE	99	%	1.0		
1,2-DICHLOROETHANE-D4	94	%	1.0		
TOLUENE-D8	100	%	1.0		
P-BROMOFLUOROBENZENE	86	%	1.0		

Report Notes:

KATAHDIN ANALYTICAL SERVICES
REPORT OF ANALYTICAL RESULTS

Client: Paul Calligan
Tetra Tech NUS
1401 Oven Park Dr.
Suite 102
Tallahassee, FL 32308

Proj. ID: CNC CHARLESTON

Lab Number: VBLKU28A
SDG: WP4075
Report Date: 10/15/99
PO No. : N7912-P99264
Project: CTO #68
% Solids: N/A
Method: SW8260
Date Analyzed: 9/28/99

Sample Description	Matrix	Sampled Date	Rec'd Date	Ext. Date	Ext'd By	Ext. Method	Analyst
VBLKU28A	AQ	-	-	9/28/99	HMP	5030	HMP

Compound	Result	Units	DF	Sample PQL	Method PQL
BENZENE	<5	ug/L	1.0	5	5
TOLUENE	<5	ug/L	1.0	5	5
1,2-DIBROMOETHANE	<5	ug/L	1.0	5	5
ETHYLBENZENE	<5	ug/L	1.0	5	5
NAPHTHALENE	<5	ug/L	1.0	5	5
MTBE	<5	ug/L	1.0	5	5
TOTAL XYLENES	<5	ug/L	1.0	5	5
DIBROMOFLUOROMETHANE	101	%	1.0		
1,2-DICHLOROETHANE-D4	101	%	1.0		
TOLUENE-D8	100	%	1.0		
P-BROMOFLUOROBENZENE	99	%	1.0		

Report Notes:

0000161

KATAHDIN ANALYTICAL SERVICES
REPORT OF ANALYTICAL RESULTS

Client: Paul Calligan
Tetra Tech NUS
1401 Oven Park Dr.
Suite 102
Tallahassee, FL 32308

Proj. ID: CNC CHARLESTON

Lab Number: WP4075-40
SDG: WP4075
Report Date: 10/15/99
PO No. : N7912-P99264
Project: CTO #68
% Solids: N/A
Method: SW8260
Date Analyzed: 9/28/99

Sample Description	Matrix	Sampled Date	Rec'd Date	Ext. Date	Ext'd By	Ext. Method	Analyst
28TL00101	AQ	9/23/99	9/25/99	9/28/99	HMP	5030	HMP

Compound	Result	Units	DF	Sample PQL	Method PQL
BENZENE	<5	ug/L	1.0	5	5
TOLUENE	<5	ug/L	1.0	5	5
1,2-DIBROMOETHANE	<5	ug/L	1.0	5	5
ETHYLBENZENE	<5	ug/L	1.0	5	5
NAPHTHALENE	<5	ug/L	1.0	5	5
MTBE	<5	ug/L	1.0	5	5
TOTAL XYLENES	<5	ug/L	1.0	5	5
DIBROMOFLUOROMETHANE	104	%	1.0		
1,2-DICHLOROETHANE-D4	105	%	1.0		
TOLUENE-D8	102	%	1.0		
P-BROMOFLUOROBENZENE	101	%	1.0		

Report Notes:

KATAHDIN ANALYTICAL SERVICES
REPORT OF ANALYTICAL RESULTS

Client: Paul Calligan
Tetra Tech NUS
1401 Oven Park Dr.
Suite 102
Tallahassee, FL 32308

Proj. ID: CNC CHARLESTON

Lab Number: WP4075-41
SDG: WP4075
Report Date: 10/15/99
PO No. : N7912-P99264
Project: CTO #68
% Solids: N/A
Method: SW8260
Date Analyzed: 9/28/99

Sample Description	Matrix	Sampled Date	Rec'd Date	Ext. Date	Ext'd By	Ext. Method	Analyst
28TL00201	AQ	9/24/99	9/25/99	9/28/99	HMP	5030	HMP

Compound	Result	Units	DF	Sample PQL	Method PQL
BENZENE	<5	ug/L	1.0	5	5
TOLUENE	<5	ug/L	1.0	5	5
1,2-DIBROMOETHANE	<5	ug/L	1.0	5	5
ETHYLBENZENE	<5	ug/L	1.0	5	5
NAPHTHALENE	<5	ug/L	1.0	5	5
MTBE	<5	ug/L	1.0	5	5
TOTAL XYLENES	<5	ug/L	1.0	5	5
DIBROMOFLUOROMETHANE	104	%	1.0		
1,2-DICHLOROETHANE-D4	106	%	1.0		
TOLUENE-D8	102	%	1.0		
4-BROMOFLUOROBENZENE	100	%	1.0		

Report Notes:

Katahdin Analytical Services
340 County Road No. 5
P.O. Box 720
Westbrook, ME 04092
Tel: (207) 874-2400
Fax: (207) 775-4029

CHAIN of CUSTODY

PLEASE PRINT IN PEN

Page ____ of ____

Client: TETRA TECH NUS
Contact: Paul Calligan
Phone #: (850) 385-9899
Fax #: ( )
Address: 1401 OVEN PARK DR 1401
City: Tallahassee
State: FL
Zip Code:
Purchase Order #:
Proj. Name / No.:
Katahdin Quote #:
Bill (if different than above):
Address:
Sampler (Print / Sign): TNT / Thomas Thompson
Copies To:

LAB USE ONLY
WORK ORDER #: WP4075
KATAHDIN PROJECT MANAGER:

REMARKS:

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT
AIRBILL NO:
TEMP°C ____ ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

ANALYSIS AND CONTAINER TYPE PRESERVATIVES

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	BTEX, MTBE, EDB, Total Naphthalene	8270	Total Lead	TPH (1) PAH	TOC (1) Anions	Grain Size	FOC	Metals	Dissolved Methane	Filt. ☐Y☐N
	23SLB080203	9-24-99/0900	S	6	4	1	1							
	23SLB010203	9-24-99/0925	S	6	4	1	1							
	23SLB130203	9-24-99/1010	S	6	4	1	1				✓			
	23SLB030203	9-24-99/1110	S	7	4	1	1			1				
	23SLB030203D	9-24-99/0000	S	6	4	1	1							
	36SLB060304	9-24-99/1649	S	7 (11)	4	1				1		1		
	23SLB040203	9-24-99/1730	S	6	4	1	1							
	26SLB140405	9-24-99/0845	S	5	4	1								
	42SLB090304	9-24-99/1035	S	1						1				
	42SLB200203	9-24-99/1050	S	1						1				
	42SLB410304	9-24-99/1120	S	1						1				
	42SLB270304	9-24-99/1140	S								1			
	28GLM0101	9-24-99/0840	GW	9	3			2	1				3	
	28TL00201	9-24-99/~~0840~~	aq	2										
		/					Cooler ~~1 of 3~~			3 of 5				
		/												

COMMENTS

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
[signature]	9/24/99 1800	8134583692 82		9-25-99 1000	[signature]
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

FORMSOURCE INC. ☎ (207) 782-3311
FORM # CHN-OF-CSTDY

ORIGINAL

Katahdin ANALYTICAL SERVICES
P.O. Box 720
Westbrook, ME 04098
Tel: (207) 874-2400
Fax: (207) 775-4029

CHAIN OF CUSTODY

PLEASE PRINT IN PEN

Client: Tetra Tech NUS
Contact: Paul Calligan
Phone #: (843) 554-4425
Fax #: ( )
Address: NH-21. Ave H
City: N. Charleston
State: SC
Zip Code:
Purchase Order #:
Proj. Name / No.: Charleston Naval Complex
Katahdin Quote #:
Bill (if different than above):
Address:
Sampler (Print / Sign): Roger Franklin
Copies To:

LAB USE ONLY
WORK ORDER #: WP4075
KATAHDIN PROJECT MANAGER:

REMARKS:

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT
AIRBILL NO:
TEMP°C: ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

ANALYSIS AND CONTAINER TYPE PRESERVATIVES

*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	(8260) BTEX Naphthalene	EDB	PAH (8270)	TAL Metals	Total Lead					FID
	26SLB35Ø4Ø5	9/23/99/1635	S	5	X	X	X							2
	26SLB36Ø4Ø5	9/23/99/1610	S	5	X	X	X							42
	36SLBØ7Ø3Ø4	9/23/99/1210	S	6	X		X	X						46
	36SLBØ4Ø3Ø4	9/23/99/0900	S	6	X		X	X						0
	3SLBØ5Ø2Ø3	9/23/99/1620	S	6	X	X	X		X					
	23SLBØ6ØØØ1	9/23/99/1715	S	6	X	X	X		X					
		/												
		/												
		/												
		/												
		/												
		/												
		/						Cooler ~~2 of 3~~ 4 of 5 (BR)						
		/												
		/												
		/												

COMMENTS

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
	9/23/99 1900	Fed-Ex 8134585692 93		9-24-99 1054	
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

Katahdin ANALYTICAL SERVICES
340 County Road No. 5
P.O. Box 720
Westbrook, ME 04092
Tel: (207) 874-2400
Fax: (207) 775-4029

CHAIN of CUSTODY

PLEASE PRINT IN PEN

Client: TT NUS
Contact: Paul Calligan
Phone #: (843) 554-4925
Fax #: ( )
Address: NH-21 Ave H
City: N. Charleston
State: SC
Zip Code:
Purchase Order #:
Proj. Name / No.: Charleston Naval Complex
Katahdin Quote #:
Bill (if different than above):
Address:
Sampler (Print / Sign): Jennifer Elliott
Copies To:

LAB USE ONLY
WORK ORDER #: WP4075
KATAHDIN PROJECT MANAGER:

REMARKS:

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT
AIRBILL NO:
TEMP°C ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

ANALYSIS AND CONTAINER TYPE PRESERVATIVES

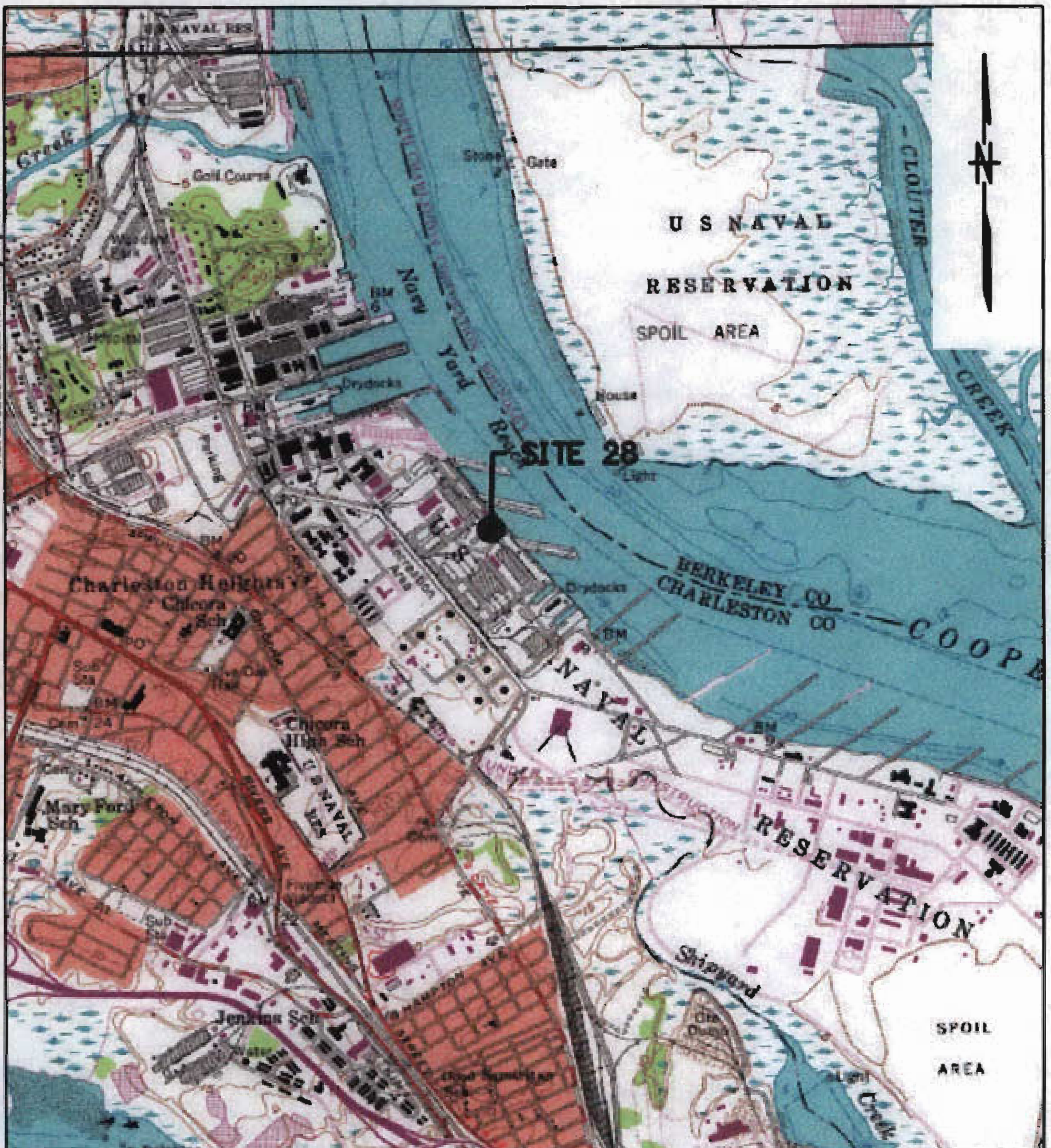
*	Sample Description	Date / Time coll'd	Matrix	No. of Cntrs.	BTEX, EDB, Naph, MTBE	Dissolved Methane	PAHs	Metals	Anions						
	27GLM01D1	9-23/1050	GW		3	3	2	1	1						
	27GLX03D1	9-23/1010			3		2	1							
	27GLX04D1	9-23/1010			3		2	1							
	27GLX40D1	9-23/1012			3		2	1							
	27GLX05D1	9-23/1100			3	3	2	1	1						
	27GLX07D1	9-23/1120			3	3	2	1	1						
	27GLM01D1D	9-23/—			3	3	2	1	1						
	28GLM03D1	9-23/1615			3	3	2	1	1						
	28GLM02D1	9-23/1640			3	3	2	1	1						
	28GLM02D1D	9-23/—			3	3	2	1	1						
	28TL01D1	9-23/			2										
		/													
		/													
		/													
		/													
		/													

COMMENTS: ~~2 of 3~~ 4 of 5 — cooler (BK)

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
	9-23 1850	Fed-Ex 813458369293		9-25-99 (08)	
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

APPENDIX C

TOPOGRAPHIC MAP WITH SITE LOCATION



SOURCE: QUADRANGLE MAP SOUTH CAROLINA, REVISED 1979
QUADRANGLE MAP NORTH CHARLESTON REVISED, 1979

0 2000 4000
SCALE IN FEET

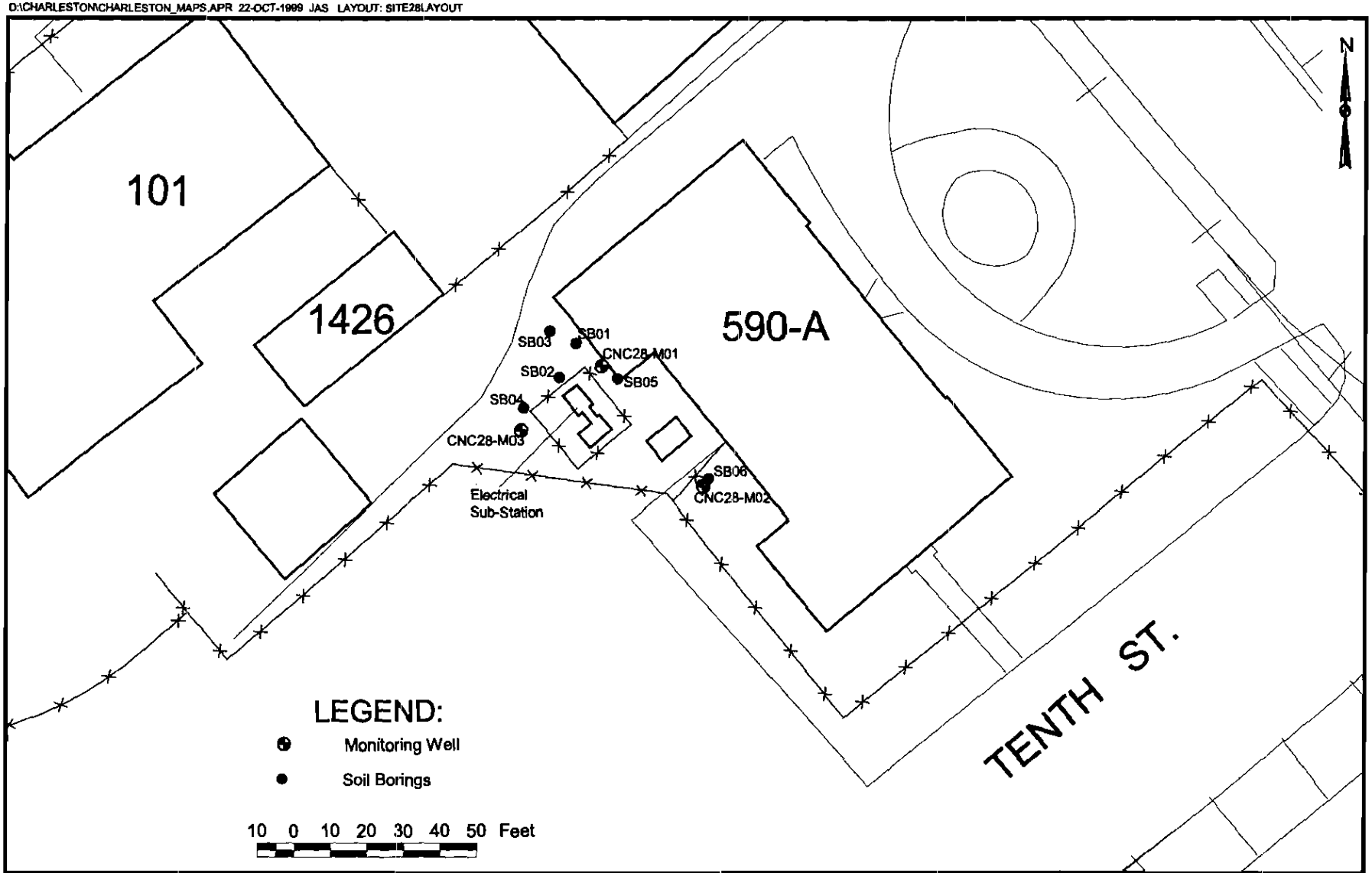
DRAWN BY HJP / DATE 8/20/99		SITE LOCATION MAP SITE 28, BUILDING 590A ZONE E, CHARLESTON NAVAL COMPLEX NORTH CHARLESTON, SOUTH CAROLINA	CONTRACT NO. N0126
CHECKED BY / DATE			APPROVED BY / DATE
COST/SCHED-AREA			APPROVED BY / DATE
SCALE AS NOTED			DRAWING NO. FIGURE 1 / REV. 0

FORM CADD NO. SDIV_AV.DWG - REV 0 - 1/20/98

APPENDIX D

SITE BASE MAP

D:\CHARLESTON\CHARLESTON_MAPS.APR 22-OCT-1999 JAS LAYOUT: SITE28LAYOUT



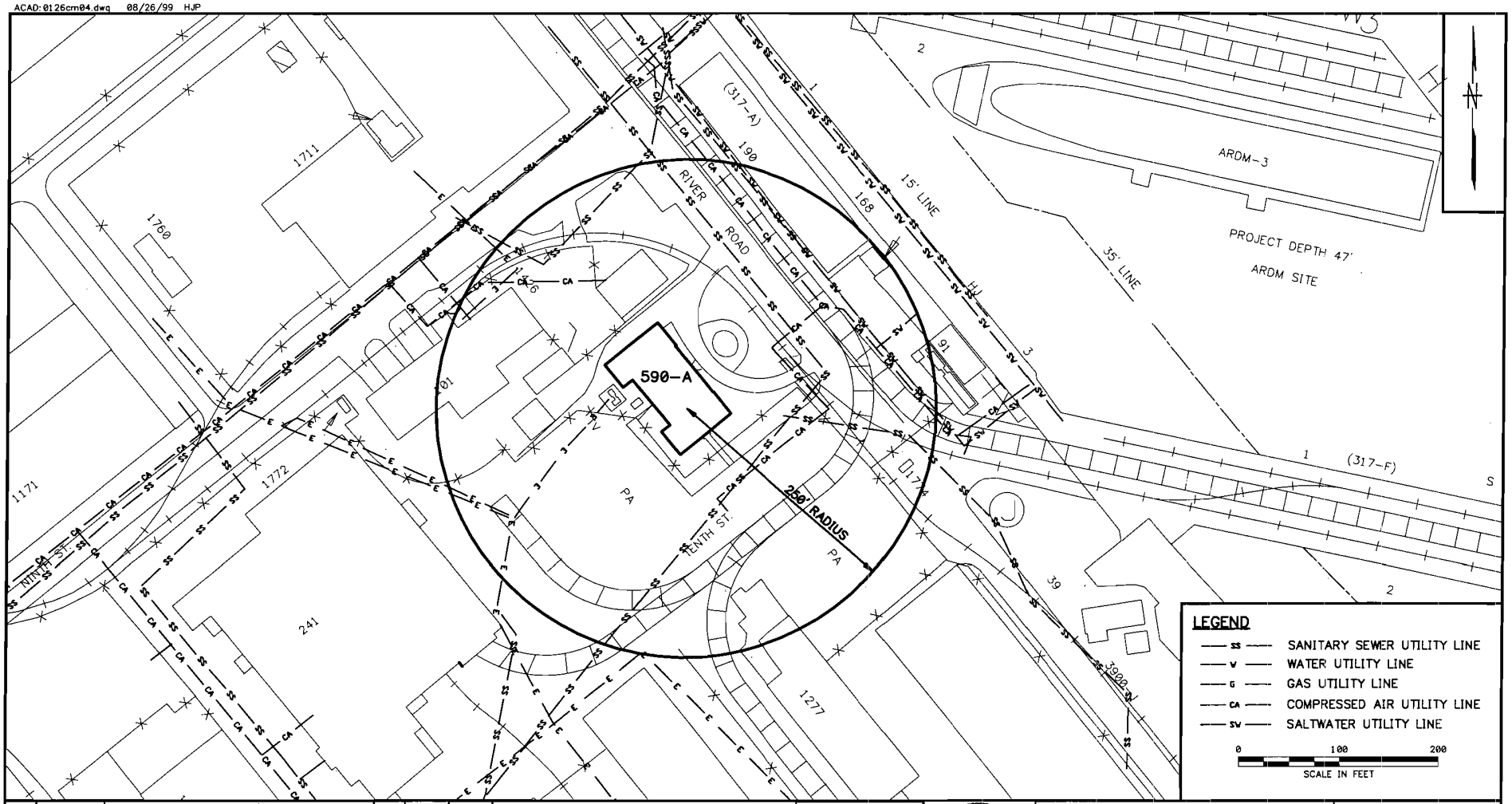
NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES

DRAWN BY JAS	DATE 10/22/1999
CHECKED BY	DATE
COST/SCHED-AREA	
SCALE AS NOTED	

SITE VICINTY MAP
SITE 28, BUILD 590-A
ZONE E, CHARLESTON NAVAL COMPLEX
NORTH CHARLESTON, SOUTH CAROLINA

CONTRACT NO. 0126	
APPROVED BY	DATE
APPROVED BY	DATE
DRAWING NO.	REV. 0

ACAD:0126cm04.dwg 08/26/99 HJP



NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES

DRAWN BY HJP DATE 8/25/99
CHECKED BY DATE
COST/SCHED-AREA
SCALE AS NOTED

SITE VICINITY MAP
SITE 28, BUILDING 590A
ZONE E, CHARLESTON NAVAL COMPLEX
NORTH CHARLESTON, SOUTH CAROLINA

CONTRACT NO. 0126
APPROVED BY DATE
APPROVED BY DATE
DRAWING NO. FIGURE 2
REV. 0

FORM CADD NO. SDIV_BH.DWG - REV 0 - 1/20/98